Table 1, Quantum yields of photosensitized production of singlet oxygen.

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.1	**2′-Acetonaphthone (2-ACN)**								
	C_6H_6	air or O_2	0.71	0.81				See Table 4.	
	C_6H_6	air[a]	0.73^T	0.87			CP/LI-56,42	S′ = 9-Fluorenone; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 0.84$. $P_T^{O_2} = 1$; measured ratio of I_a at $\lambda_{exc}(S) = 336$ and $\lambda_{exc}(S') = 367$ nm.	91F023
	C_6H_6	air	0.59^T	0.70			PL/LI,St-55,42	S′ = Ac; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.84^e$. $\varepsilon_T(S) = 10{,}500$ L mol^{-1} cm^{-1} at 430 nm, $\varepsilon_T(S') = 24{,}300$ L mol^{-1} cm^{-1} at 440 nm, $P_T^{O_2}$ (S and S′) = 1.	84E373
	C_6H_6	O_2	0.73^T	0.87			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.84$. Measured $\phi_\Delta = 0.73$, $P_T^{O_2} = 1$ and ϕ_F.	88E449
	C_6H_6	O_2	0.71^T	0.85			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) =$ 0.84. Measured $P_T^{O_2} = 1$.	88E449
	C_6H_6	O_2	0.4^T	0.5			PR/Ad,St-49,42	A = DPBF; used $\phi_T(S) = 0.84$, $\varepsilon_T(S) = 10{,}500$ L mol^{-1} cm^{-1} at 430 nm. Measured $G(^3S^*)$.	78E263
	CD_3OD	air[a]	0.79^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.76$. $P_T^{O_2} = 1$; meas. ratio of I_a at $\lambda_{exc}(S) = 336$ and $\lambda_{exc}(S') = 547$ nm.	91F023
	MeOH	O_2	0.75^T				CP/Ac-15	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$.	767071
1.2	**Acetophenone (AP)**								
	C_6H_6	air	 0.29^T	0.35* 0.29			PL/LI,St-55,42	S′ = BP; rel. to $f_\Delta^T(S') = 0.29$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1^c$.	86A230
	C_6H_6	air[a]	0.41^T	0.41			PL/βCb-43,42	S′ = BP; TD = S; rel. to $f_\Delta^T(S') = 0.35$; used $\phi_T(S) = 1$. Measured $\phi_\Delta(S)/\phi_\Delta(S') = 1.2$.	76F904
	C_6H_6	O_2	0.33^T	0.33			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Measured $\phi_\Delta = 0.31$, $P_T^{O_2} = 0.94$ and ϕ_F.	88E449
	C_6H_6	O_2	0.36^T	0.36			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 1$. Measured $P_T^{O_2} = 0.94$.	88E449
	C_6H_6	O_2	 0.35^T	0.31* 0.35			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S') = 0.39$; meas. $\phi_T(S) = 1^c$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.52^T	0.52			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S') = 0.37$; meas. $\phi_T(S) = 1^c$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	MeOH	O_2	<0.58				CP/Oc-14	A = 2,5-DMF; $\lambda_{exc} = 283$-373 nm. Some free radical reaction occurs.	70F735
1.3	**Acetophenone, 4′-cyano-**								
	C_6H_6	O_2	 0.49^T	0.44* 0.49			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S') = 0.39$; meas. $\phi_T(S) = 1^c$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.76^T	0.76			PL/Ad,TAt-50,42	S′ – BP; A – DPBF; TA – 1-MeNp; rel. to $f_\Delta^T(S') = 0.37$; meas. $\phi_T(S) = 1^c$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
1.4	**Acetophenone, 3′-methoxy-**								
	C_6H_6	air		0.33* 0.27			PL/LI,St-55	S′ = BP; rel. to $f_\Delta^T(S') = 0.29$; $\lambda_{exc} = 355$ nm.	86A230
1.5	**Acetophenone, 4′-methoxy-**								
	C_6H_6	O_2	 0.27^T	0.24* 0.27			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S') = 0.39$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.42^T	0.42			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S') = 0.37$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.6	**Acetophenone, 2′-methyl-, biradical**								
	CH_3CN	air[a]	0.23^T	0.38			PL/LI-56	S' = Ac; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 337$ nm. f_Δ^T based on quantum yield of biradical formation = 0.60 in soln. contg. 0.012 mol L^{-1} 2-methylacetophenone.	89A241
1.7	**Acridine (Ac)**								
	C_6H_6	air or O_2	0.83	0.99				See Table 4.	
	C_6H_6	O_2	0.84^T	1			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.86^g$. Measured $\phi_\Delta = 0.84$, $P_T^{O_2} = 1$ and ϕ_F.	88E449
	C_6H_6	O_2	0.84^T	1			PL/LI-56,42	S' = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 0.86^g$. Measured $P_T^{O_2} = 1$.	88E449
	C_6H_6	O_2	0.6^T	0.7			PR/Ad,St-49,42	A = DPBF; used $\phi_T(S) = 0.86^g$, $\varepsilon_T(S) = 24{,}300$ L mol^{-1} cm^{-1} at 440 nm. Measured $G(^3S^*)$.	78E263
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.95^T				PL/Ad,ACt-49	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7640$ L mol^{-1} cm^{-1} at 525 nm. $P_T^{O_2} = 1$; $p_A = 1$.	87E410
	CH_3CN	O_2	0.82^T				PL/Hp-52	$\lambda_{exc} = 354$ nm.	88Z155
1.8	**9-Acridinethione, 10-methyl- (NMTA)**								
	c-C_6H_{12}	O_2		1			PL/Ad,St-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.79$; $\lambda_{exc} = 485$ nm; used $k_d = 5.0 \times 10^4$ s^{-1}, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(S) = 8800$ L mol^{-1} cm^{-1} at 520 nm. Measured $P_T^{O_2}$.	84E342
	C_6H_6	O_2		0.92			PL/Ad,St-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.85$; $\lambda_{exc} = 485$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(S) = 9300$ L mol^{-1} cm^{-1} at 520 nm. Measured $P_T^{O_2}$.	84E342
	CH_3CN	O_2		0.85			PL/Ad,St-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.76$; $\lambda_{exc} = 485$ nm; used $k_d = 2.5 \times 10^4$ s^{-1}, $k_A = 1.0 \times 10^9$ L mol^{-1} s^{-1}, $\varepsilon_T(S) = 9000$ L mol^{-1} cm^{-1} at 520 nm. Measured $P_T^{O_2}$.	84E342
	MeOH	O_2		1.0			PL/Ad,St-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.75$; $\lambda_{exc} = 485$ nm; used $k_d = 1.0 \times 10^5$ s^{-1}, $k_A = 8.1 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(S) = 8500$ L mol^{-1} cm^{-1} at 520 nm. Measured $P_T^{O_2}$.	84E342
1.9	**Acridinium, 3,6-diamino- (Proflavine)**								
	H_2O	air[a]	0.12	0.25			CP/Ac-43,42	$S' = MB^+$; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.52$; used $\phi_T(S) = 0.47$. Assumed $P_T^{O_2} = 1$.	737339
1.10	**Acridinium, 3,6-diamino-10-methyl- (Acriflavine)**								
	CH_3COCH_3	air[a]	0.1				MP/LI-56	S' = Ph a; rel. to $\phi_\Delta(S') = 0.8$. Rel. to S' in CCl_4.	82Z317
1.11	**Allopsoralen (Furo[2,3-*f*]benzopyran-7-one)**								
	C_6H_6	O_2	0.08* 0.07^T	0.41			PL/LI-56,42	S' = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.17$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
1.12	**Angelicin (Furo[2,3-*h*]benzopyran-2-one, Ang)**								
	C_6H_6	O_2	0.01^T	0.33			PL/LI-56,42	S' = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.03$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
	CCl_4	air	0.002* 0.0026^T				MP/LI-56	S' = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 652$ nm.	83E813
	D_2O	air	0.02^T				PL/LI-56	S' = RF; rel. to $\phi_\Delta(S') = 0.3$; $\lambda_{exc} = 337$ nm.	86E959 86F144
	MeOH	air	0.03^T	1			PL/LI-56,42	S' = RF; rel. to $\phi_\Delta(S') = 0.4$; $\lambda_{exc} = 337$ nm; used $\phi_T(S) = 0.31^d$.	86E959 86F144

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.13	**Anthracene (An)**								
	iso-BuOH	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.32$	87E668
	1-BuOH	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.26$	87E668
	$(C_2H_5)_2O$	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.35$	87E668
	i-$C_5H_{11}OH$	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.38$	87E668
	n-C_6H_{14}	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.68$	87E668
	$C_6H_5CH_3$	0.2 atm O_2	0.83				PL/LI-38,56	used $\phi_T(S) = 0.72$. Assumed $f_T^{O_2} = 1$; used $f_\Delta^T = 1.0$ and $f_\Delta^S = 0.46$.	87E668
	$C_6H_5CH_3$	O_2	1.0				PL/LI-38,56	used $\phi_T(S) = 0.72$. Assumed $f_T^{O_2} = 1$; used $f_\Delta^T = 1.0$ and $f_\Delta^S = 0.46$.	87E668
	$C_6H_5CH_3$	1.2×10^{-3}				1.0	PL/Ad,St-48	A = Rub; $\lambda_{exc} = 347$ nm; used $\phi_T(S) = 0.72$, $\varepsilon_T(S) = 42{,}000$ L mol^{-1} cm^{-1} at 428.5 nm. $P_T^{O_2} = 1$; $n_\Delta = 1$.	83F075
	C_6H_5CN	1.2×10^{-3}				0.57	PL/Ad,St-48	A = Rub; $\lambda_{exc} = 347$ nm; used $\phi_T(S) = 0.72$. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 24{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.57$.	83F075
	C_6H_5Cl	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.95$	87E668
	C_6H_6	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.85$	87E668
	C_6H_6	1.3×10^{-4}	0.58^T	0.77			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.75$. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452
	C_6H_6	air	~0.74				PL/Hp-52,42	$\lambda_{exc} = 337$ nm. Measured ϕ_T; assumed $P_T^{O_2} = 1$, $[S] > 5 \times 10^{-4}$ mol L^{-1}, used $\phi_F = 0.22$; $\phi_\Delta = 0.50$ extrapolating $[S] \rightarrow 0$; authors used meas. ϕ_T to give $f_\Delta^T = 0.95$ but $P_S^{O_2} \neq 0$.	91F198
	C_6H_6	air	0.61				PL/Hp-52	$\lambda_{exc} = 355$ nm. Assumed $f_\Delta^S = 0$; $\phi_T^{O_2} = 0.78$ gives $f_\Delta^T = 0.78$.	85E591
	C_6H_6	air[a]	0.63				PL/βCb-43	S′ = BP; rel. to $\phi_\Delta(S') = 0.35$. Measured $\phi_\Delta(S)/\phi_\Delta(S') = 1.8$; since $P_S^{O_2} \neq 0$, only ϕ_Δ is obtainable.	76F904
	C_6H_6	1.9×10^{-3}	0.88				CP/Ac-46	S′ = A = DMA; rel. to $\phi_\Delta(S') = 0.52$; $\lambda_{exc} = 365$ nm. Assumed $f_T^{O_2} = 1$.	81F364
	C_6H_6	O_2	0.68				PL/Hp-52	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.78$. Measured $\phi_\Delta = 0.68$, $P_T^{O_2} = 1$ and $\phi_T^{O_2} = \phi_T(S)$ and ϕ_F. Authors assume $f_\Delta^S = 0$ and $f_\Delta^T = 0.87$ but $P_S^{O_2} = 0.52$ so values of f_Δ^S and f_Δ^T are indeterminable.	88E449
	C_6H_6	O_2	0.63				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$. Measured $P_T^{O_2} = 1$ and $\phi_T^{O_2} \approx \phi_T(S)$. Authors assume $f_\Delta^S = 0$ and $f_\Delta^T = 0.87$ but $P_S^{O_2} = 0.52$ so values of f_Δ^S and f_Δ^T are indeterminable.	88E449
	C_6H_6	O_2		0.7			PR/Ad,St-49	A = DPBF; used $\phi_T(S) = 0.75$, $\varepsilon_T(S) = 45{,}500$ L mol^{-1} cm^{-1} at 432 nm. Measured $G(^3S^*)$.	78E263
	C_6H_6	9.0×10^{-3}	1.1	1.0	0.46		CP/Ac-46,38	S′ = A = DMA; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 365$ nm; used $\phi_T(S) = 0.74$. Assumed $f_T^{O_2} = 1$; $\phi_\Delta(S') = 1$ through coronene using $\phi_\Delta(\text{ave.}) = 0.88$.	81F364
	n-C_7H_{16}	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.63$	87E668
	CCl_4	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.075$	87E668
	CCl_4	air	0.13* 0.15				MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	86E959
	CCl_4	O_2	0.75				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CH_2Cl_2	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.37$	87E668
	CH_3CN	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.27$	87E668
	CH_3COCH_3	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.45$	87E668

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.13	**Anthracene (An)—Continued**								
	$CHCl_3$	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.62$	87E668
	$CHCl_3$	O_2	0.69				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	0.70				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	DMF	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.36$	87E668
	EtOH	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.26$	87E668
	$HCONH_2$	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.20$	87E668
	MeOH	air	0.7				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.4$.	86E959
	1-PrOH	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.3$	87E668
	2-PrOH	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.32$	87E668
	c-C_4H_8O	0.2 atm O_2					PL/LI-56	$\phi_\Delta(\tau_r(\text{toluene})/\tau_r) = 0.44$	87E668
1.14	**Anthracene, 1-chloro-**								
	CCl_4	O_2	0.45				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	0.66				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	0.64				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.15	**Anthracene, 9-chloro-**								
	CCl_4	O_2	0.63				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	0.56				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	0.57				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.16	**Anthracene, 9-cyano-**								
	C_6H_6 and CH_3CN	air and O_2	~2^{ST}	~1	~1		CP/Pa-14	$\lambda_{exc} = 365$ nm. A = TME, 2M2B, or cyclohexene, P = alkene hydroperoxides, solvent = C_6H_6 and CH_3CN.	85F160
1.17	**Anthracene, 9,10-dibromo-**								
	C_6H_6	air	~0.85	~0.96			PL/Hp-52,42	$\lambda_{exc} = 337, 400$ nm. Measured ϕ_T; [S] > 5 × 10^{-4} mol L^{-1}, assumed $P_T^{O_2} = 1$, used ϕ_F = 0.11; $\phi_\Delta = 0.44, f_\Delta^T = 0.49$ extrapolating [S] → 0.	91F198
1.18	**Anthracene, 9,10-dichloro-**								
	CCl_4	O_2	0.89				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	1.6				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	2.0				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.19	**Anthracene, 9,10-dicyano- (DCA)**								
	c-C_6H_{12}	→ ∞	1.9^{ST}				PL/LI-56	S′ = Py; rel. to $\phi_\Delta(S') = 0.81$; $\lambda_{exc} = 355$ nm.	91E297
	C_6H_6	air	0.19				CP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.67$.	89E223 88E609
	C_6H_6	air	0.48				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	C_6H_6	1.45×10^{-3}	0.28				CP/Ac-14,38	A = 2M2P. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$.	83F172
	C_6H_6	6.8×10^{-3}	0.82			1.7	CP/Ac-14,38	A = 2M2P; $\lambda_{exc} = 334, 366$ nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$.	83F172
	C_6H_6	→ ∞	1.6^{ST}	0.70	0.86		PL/LI-56,38	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm. Used $f_T^{O_2} = 1$; f_Δ^T was measured using 2,5-dimethyliodobenzene enhanced intersystem crossing producing $^3S^*$ with 50% efficiency.	92F013
	C_6D_6	1.45×10^{-3}	0.46				PL/LI-38,56	S′ = DNT; rel. to $\phi_\Delta(S') = 0.98$; $\lambda_{exc} = 355$ nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0, f_T^{O_2} = 1$.	83F172
	C_6D_6	6.8×10^{-3}	1.1			1.6	PL/LI-38,56	S′ = DNT; rel. to $\phi_\Delta(S') = 0.98$; $\lambda_{exc} = 355$ nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0, f_T^{O_2} = 1$.	83F172

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.19	**Anthracene, 9,10-dicyano- (DCA)**—Continued								
	C_6H_6 and CH_3CN	air and O_2	$\sim 2^{ST}$	~1	~1		CP/Pa-14	λ_{exc} = 365 nm. A = TME, 2M2B, or cyclohexene, P = alkene hydroperoxides, solvent = C_6H_6 and CH_3CN.	85F160
	CCl_4	air	0.15* 0.13				CP/LI-56	S′ = TPP; A = MDH; rel. to $\phi_\Delta(S') = 0.54$.	89E223
	CCl_4	air	0.16				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CCl_4	O_2	2^{ST}				CP/Pa-14	A = DPB. $P_T^{O_2} = 1$.	90F292
	CH_3CN	air	0.23				CP/LI-56	S′ = TPP; A = MDH; rel. to $\phi_\Delta(S') = 0.50$.	89E223
	CH_3CN	air	0.76				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CH_3CN	1.7×10^{-3}	0.06				CP/Ac-14,38	A = 2M2P; λ_{exc} = 334, 366 nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$.	83F172
	CH_3CN	8.1×10^{-3}	0.25			2.0	CP/Ac-14,38	A = 2M2P; λ_{exc} = 334, 366 nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$.	83F172
	CH_3CN	$\to \infty$	1.5^{ST}		0.76		PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; λ_{exc} = 355 nm. Assumed $f_\Delta{}^T = 0.7$, $f_T^{O_2} = 1$.	92F013
	CD_3CN	1.7×10^{-3}	0.90				PL/LI-38,56	S′ = DNT; rel. to $\phi_\Delta(S') = 0.62$; λ_{exc} = 355 nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$, $f_T^{O_2} = 1$.	83F172
	CD_3CN	8.1×10^{-3}	1.6			2.0	PL/LI-38,56	S′ = DNT; rel. to $\phi_\Delta(S') = 0.62$; λ_{exc} = 355 nm. Used $P_T^{O_2} = 1$, assumed $\phi_T = 0$, $f_T^{O_2} = 1$.	83F172
	$CHCl_3$	air	0.16				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$CHCl_3$	air	0.09				CP/LI-56	S′ = TPP; A = MDH; rel. to $\phi_\Delta(S') = 0.50$.	89E223
	CS_2	air	0.09				CP/LI-56	S′ = TPP; A = MDH; rel. to $\phi_\Delta(S') = 0.51$.	89E223
	CS_2	air	0.17				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$ClCF_2CCl_2F$	air	0.14				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$ClCF_2CCl_2F$	air	0.09				CP/LI-56	S′ = TPP; A = MDH; rel. to $\phi_\Delta(S') = 0.41$.	89E223
1.20	**Anthracene, 1,4-dimethoxy-9,10-diphenyl-**								
	$(C_2H_5)_2O$	$(2\text{-}9) \times 10^{-3}$				0.69	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta{}^T \approx 0$.	84F197
	$CH_3CO_2C_2H_5$	$(2\text{-}9) \times 10^{-3}$				0.69	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta{}^T = 0.08$.	84F197
1.21	**Anthracene, 9,10-dimethyl- (DMA)**								
	C_5H_5N	O_2	0.19				CP/Oc-14	A = H_2NCSNH_2; λ_{exc} = 405 nm. Assumed f_r^A = 2.	737347 74E522
	n-C_6H_{14}	O_2	1.1	≥0.42	≥0.41		CP/Ac-27	A = 2,5-DMF; λ_{exc} = 313 nm. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	$C_6H_5CH_3$	$(2\text{-}9) \times 10^{-3}$				2.0	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta{}^T = 0.05$.	84F197
	C_6H_6	air[a]	0.08^T	1	1	2.0	CP/Ac-14,40	A = S. Assumed $f_T^{O_2} = 1$; $f_\Delta{}^T + f_\Delta{}^S$ from ϕ_Δ when $P_S^{O_2} = 1$; $\phi_T f_\Delta{}^T = \phi_\Delta$ when $P_S^{O_2} = 0$.	767422
	C_6H_6	air[a]			≥0.62	≥1.6	CP/Ac-14,38	A = S. Assumed $f_\Delta{}^T = 1$ and $f_T^{O_2} = 1$.	76F905
	C_6H_6	O_2 var.					CP/Ac-14,38	A = S; λ_{exc} = 365 nm. $\phi_T f_\Delta{}^T / (f_\Delta{}^T + f_\Delta{}^S) = 0.02 \pm 0.05$.	68F286
	C_6H_6	1.9×10^{-3}	0.52				CP/Ac-14	A = S; λ_{exc} = 365 nm. Assumed $f_T^{O_2} = 1$; measured $\phi_\Delta(S)/\phi_\Delta(S') = 0.56$, 0.59 and 0.91 for S′ = Cor, An and BP, resp.	81F364
	C_6H_6	9.0×10^{-3}	1.0			1.4	CP/Ac-14	A = S; λ_{exc} = 365 nm; used $\phi_T(S) = -0.02$. Assumed $f_T^{O_2} = 1$; measured $\phi_\Delta(S)/\phi_\Delta(S')$ = 1.1, 0.91 and 1.1 for S′ = Cor, An and BP, resp.	81F364
1.22	**Anthracene, 2-(3,3-dimethyl-1-butenyl)-, (*E*)-**								
	C_6H_6	1.3×10^{-4}	0.46* 0.38^T	 0.76			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S)$ = 0.46; λ_{exc} = 355 nm. $P_S^{O_2}$ <0.02 and $P_T^{O_2}$ >0.99.	88E452

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.23	**Anthracene, 2-(3,3-dimethyl-1-butenyl)-, (*Z*)-**								
	C_6H_6	1.3×10^{-4}	0.63* 0.52^T	 0.88			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.59$; $\lambda_{exc} = 355$ nm. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452
1.24	**Anthracene, 9-(1,1-dimethylethyl)-**								
	H_2O (mic) pH = 7	air[a]					CP/Pa-43	S′ = An; A = Im; P = Imidazole endoperoxide; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.06$. soln. cont. 1% CTAB, RNO as monitor of P.	83N082
1.25	**Anthracene, 9,10-diphenyl-**								
	n-C_6H_{14}	O_2	1.1	≥0.49	≥0.48		CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	$C_6H_5CH_3$	$(2\text{-}9) \times 10^{-3}$				0.8	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta^T = 0.08$.	84F197
	$C_6H_5CH_3$	$(2\text{-}9) \times 10^{-3}$	2^{ST}	1	1	2	PL/Ad,St-48	A = Rub; AC = S; $\lambda_{exc} = 347$ nm; used $k_d = 3.2 \times 10^4\ s^{-1}$, $k_A = 2.5 \times 10^7$ L mol^{-1} s^{-1}, ε_T(AC) = 12,000 L mol^{-1} cm^{-1} at 450 nm. $P_T^{O_2} = 1$; measured $n_\Delta = 2$, thus $f_T^{O_2} = 1$.	82E451
	C_6H_6	air	0.13^T	1			CP/Ac-14,40	A = S; $\lambda_{exc} = 436$ nm. $P_S^{O_2} = 0$; measured $\phi_T f_\Delta^T = 0.13$.	727196
	C_6H_6	air[a]	1^{ST}				CP/Pa-14,38	A = S; $\lambda_{exc} = 436$ nm. $P_S^{O_2} = 1$, measured $f_\Delta^T + f_\Delta^S f_T^{O_2} = 1$.	727196
	CCl_4	O_2	0.75				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	0.69				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	1.8				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.26	**Anthracene, 9-methyl-**								
	n-C_6H_{14}	O_2	0.97	≥0.32	≥0.19		CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	CCl_4	O_2	1.3				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	1.2				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.27	**Anthracene, 2-[2-(2-naphthyl)ethenyl]-, (*E*)-**								
	C_6H_6	1.3×10^{-4}	0.13* 0.11^T	 0.92			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.12$; $\lambda_{exc} = 355$ nm. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452
1.28	**Anthracene, 2-[2-(2-naphthyl)ethenyl]-, (*Z*)-**								
	C_6H_6	1.3×10^{-4}	0.12* 0.10^T	 0.45			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.22$; $\lambda_{exc} = 355$ nm. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452
1.29	**Anthracene, 9-phenyl-**								
	n-C_6H_{14}	O_2	1.1	≥0.50	≥0.42		CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	CCl_4	O_2	0.85				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	$CHCl_3$	O_2	0.94				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
	CS_2	O_2	0.91				CP/Oc-14	A = S; $\lambda_{exc} = 365$ nm.	537004
1.30	**Anthracene, 2-(2-phenylethenyl)-, (*Z*)-**								
	C_6H_6	1.3×10^{-4}	0.10* 0.08^T	 0.47			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.17$; $\lambda_{exc} = 355$ nm. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452
1.31	**Anthracene, 2-(2-phenylethenyl)-, (*E*)-**								
	C_6H_6	1.3×10^{-4}	0.12* 0.10^T	 0.91			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.11$; $\lambda_{exc} = 355$ nm. $P_S^{O_2} < 0.02$ and $P_T^{O_2} > 0.99$.	88E452

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.32	**Anthracene, 2-(1-propenyl)-, (*E*)-**								
	C_6H_6	1.3×10^{-4}	0.50* 0.41^T	 0.89			PL/LI-56,42	S' = BP; rel. to $\phi_\Delta(S')$ = 0.29; meas. $\phi_T(S)$ = 0.46; λ_{exc} = 355 nm. $P_S^{O_2}$ <0.02 and $P_T^{O_2}$ >0.99.	88E452
1.33	**Anthracene, 2,6,9,10-tetracyano-**								
	C_6H_6 and CH_3CN	air and O_2	$\sim2^{ST}$	~1	~1		CP/Pa-14	λ_{exc} = 365 nm. A = TME, 2M2B, or cyclohexene, P = alkene hydroperoxides, solvent = C_6H_6 and CH_3CN.	85F160
1.34	**Anthracene, 2-vinyl-**								
	C_6H_6	1.3×10^{-4}	0.43* 0.36^T	 0.73			PL/LI-56,42	S' = BP; rel. to $\phi_\Delta(S')$ = 0.29; meas. $\phi_T(S)$ = 0.49; λ_{exc} = 355 nm. $P_S^{O_2}$ <0.02 and $P_T^{O_2}$ >0.99.	88E452
1.35	**1-Anthracenesulfonate ion**								
	H_2O	3×10^{-3}	0.70	~1			CP/Ac-14	A = S. Assumed $P_T^{O_2}$ = 1 and $f_\Delta{}^S$ = 0; ϕ_T(calc.) = 0.82, T = 30°C.	78A275
1.36	**2-Anthracenesulfonate ion**								
	H_2O	3×10^{-3}	0.70	~1			CP/Ac-14	A = S. Assumed $P_T^{O_2}$ = 1 and $f_\Delta{}^S$ = 0; ϕ_T(calc.) = 0.81, T = 30°C.	78A275
1.37	**Anthra[1,9-*bc*:4,10-*b′c′*]dichromene (ADC)**								
	$C_6H_5CH_3$	$(2\text{-}9)\times10^{-3}$				0.8	CP/Ac-14,38	A = S. Assumed $f_T^{O_2}$ = 1, $\phi_T f_\Delta{}^T$ = 0.01.	84F197
1.38	**Anthra[2,1,0-*def*:6,5,10-*d′e′f′*]diisoquinoline, *N,N′*-dimethyl-**								
	D_2O	O_2	0.08				PL/LI-56	S' = ZnTMpyP^{4+}; rel. to $\phi_\Delta(S')$ = 0.88; meas. $\phi_T(S)$ = 0.12; λ_{exc} = 355 nm.	91R201
1.39	**9,10-Anthraquinone**								
	C_6H_6	O_2	0.15^T	0.17			PL/LI-56,42	S' = Pz; rel. to $\phi_\Delta(S')$ = 0.83; used $\phi_T(S)$ = 0.90. Measured $P_T^{O_2}$ = 0.65.	88E449
	C_6H_6	O_2	0.26^T	0.29			PL/Hp-52,42	λ_{exc} = 355 nm; used $\phi_T(S)$ = 0.90. Measured ϕ_Δ = 0.17, $P_T^{O_2}$ = 0.65 and ϕ_F.	88E449
	$CHCl_3$	air[a]	0.01^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640
1.40	**9,10-Anthraquinone, 1-amino-**								
	$CHCl_3$	air[a]	0.2^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640
	2-PrOH/ H_2O (5:1)	air	0.19^T				CP/Ac-43	S' = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.80; λ_{exc} = 434 nm.	88F582
1.41	**9,10-Anthraquinone, 2-amino-**								
	$CHCl_3$	air[a]	0.02^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640
	2-PrOH/ H_2O (5:1)	air	0.02^T				CP/Ac-43	S' = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.80; λ_{exc} = 434 nm.	88F582
1.42	**9,10-Anthraquinone, 1-amino-2-hydroxy-**								
	$CHCl_3$	air[a]	0.02^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640
1.43	**9,10-Anthraquinone, 1-amino-4-hydroxy-**								
	$CHCl_3$	air[a]	0.02^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640
	MeOH	O_2	0.004^T				CP/Ac-43	S' = RB; A = Bu_2S; rel. to $\phi_\Delta(S')$ = 0.80; λ_{exc} = 546 nm. Measured $P_T^{O_2}$ = 1.	80F304
	2-PrOH/ H_2O (5:1)	air	0.02^T				CP/Ac-43	S' = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.80; λ_{exc} = 545 nm.	88F582
1.44	**9,10-Anthraquinone, 1-amino-4-hydroxy-2-phenoxy-**								
	$CHCl_3$	air[a]	0.05^T				PL/LI-56	S' = MPDME; rel. to $\phi_\Delta(S')$ = 0.77[b]. $P_T^{O_2}$ = 1.	86E640

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.44	**9,10-Anthraquinone, 1-amino-4-hydroxy-2-phenoxy**—Continued								
	$CHCl_3$	air[a]	0.05^T				PL/LI-56	S′ = MPDEE; rel. to $\phi_\Delta(S') = 0.77$. $P_T^{O_2} = 1$.	82F631
	EtOH	air[a]	0.05^T				CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to $\phi_\Delta(S') = 0.77$. Assumed $P_T^{O_2} = 1$, $P_S^{O_2} = 0$.	82F631
1.45	**9,10-Anthraquinone, 1-amino-4-hydroxy-2-[4-(phenylaminosulfonyl)phenoxy]-**								
	$CHCl_3$	air[a]	0.04^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air[a]	0.04^T				PL/LI-56	S′ = MPDEE; rel. to $\phi_\Delta(S') = 0.77$. $P_T^{O_2} = 1$.	82F631
	EtOH	air[a]	0.05^T				CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to $\phi_\Delta(S') = 0.77$. Assumed $P_T^{O_2} = 1$, $P_S^{O_2} = 0$.	82F631
1.46	**9,10-Anthraquinone, 1-amino-2-methyl-**								
	CCl_4	air	0.12^T				MP/LI-56	S′ = TPBC; rel. to $\phi_\Delta(S') = 0.45$.	82A384
	$CHCl_3$	air[a]	0.12^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.47	**9,10-Anthraquinone, 1-chloro-**								
	$CHCl_3$	air[a]	0				PL/LI-56	S′ = MPDME. $P_T^{O_2} = 1$.	86E640
1.48	**9,10-Anthraquinone, 2-chloro-**								
	$CHCl_3$	air[a]	0				PL/LI-56	S′ = MPDME. $P_T^{O_2} = 1$.	86E640
1.49	**9,10-Anthraquinone, 1,2-diamino-**								
	$CHCl_3$	air[a]	0.03^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air	<0.05				CP/Pa-14	A = DMA; P = 9,10-Dimethylanthracene endoperoxide; $\lambda_{exc} = 435$ nm. $P_T^{O_2} = 1$.	80E446
	2-PrOH/ H_2O (5:1)	air	0.04^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S') = 0.80$; $\lambda_{exc} = 545$ nm.	88F582
1.50	**9,10-Anthraquinone, 1,4-diamino-**								
	CCl_4	air	0.04^T				MP/LI-56	S′ = TPBC; rel. to $\phi_\Delta(S') = 0.45$.	82A384
	$CHCl_3$	air[a]	0.01^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air	<0.05				CP/Pa-14	A = DMA; P = 9,10-Dimethylanthracene endoperoxide; $\lambda_{exc} = 435$ nm. $P_T^{O_2} = 1$.	80E446
	2-PrOH/ H_2O (5:1)	air	0.03^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S') = 0.80$; $\lambda_{exc} = 545$ nm.	88F582
1.51	**9,10-Anthraquinone, 1,5-diamino-**								
	$CHCl_3$	air[a]	0.46^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air	0.67^T				CP/Pa-14	A = DMA; P = 9,10-Dimethylanthracene endoperoxide; $\lambda_{exc} = 435$ nm. $P_T^{O_2} = 1$.	80E446
	2-PrOH/ H_2O (5:1)	air	0.80^T				CP/Ac-14	A = DPBF; $\lambda_{exc} = 434$ nm.	88F582
1.52	**9,10-Anthraquinone, 1,8-diamino-**								
	$CHCl_3$	air[a]	0.35^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air	0.77^T				CP/Pa-14	A = DMA; P = 9,10-Dimethylanthracene endoperoxide; $\lambda_{exc} = 435$ nm. $P_T^{O_2} = 1$.	80E446
	2-PrOH/ H_2O (5:1)	air	0.58^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S') = 0.80$; $\lambda_{exc} = 545$ nm.	88F582
1.53	**9,10-Anthraquinone, 2,6-diamino-**								
	2-PrOH/ H_2O (5:1)	air	0.05^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S') = 0.80$; $\lambda_{exc} = 434$ nm.	88F582
1.54	**9,10-Anthraquinone, 1,5-diamino-2-bromo-4,8-dihydroxy-**								
	$CHCl_3$	air[a]	0.35^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	$CHCl_3$	air[a]	0.15^T				PL/LI-56	S′ = MPDEE; rel. to $\phi_\Delta(S') = 0.77$. $P_T^{O_2} = 1$.	82F631

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.54	**9,10-Anthraquinone, 1,5-diamino-2-bromo-4,8-dihydroxy-**—Continued								
	CCl_4	air	0.20^T				MP/LI-56	S′ = TPBC; rel. to $\phi_\Delta(S') = 0.45$.	82A384
	EtOH	air[a]	0.16^T				CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to $\phi_\Delta(S')$ = 0.77. Assumed $P_T^{O_2} = 1$, $P_S^{O_2} = 0$.	82F631
1.55	**9,10-Anthraquinone, 1,5-diamino-4,8-dihydroxy-**								
	$CHCl_3$	air[a]	0.38^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.56	**9,10-Anthraquinone, 1,8-diamino-4,5-dihydroxy-**								
	$CHCl_3$	air[a]	0.58^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
	EtOH	air	0.28^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
	MeOH	air	0.18^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
1.57	**9,10-Anthraquinone, 2,5-diamino-1,8-dihydroxy-**								
	EtOH	air	0.12^T				CP/LI-56	S′ = RB: rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
	MeOH	air	0.08^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
1.58	**9,10-Anthraquinone, 2,7-diamino-1,8-dihydroxy-**								
	EtOH	air	0.08^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
	MeOH	air	0.07^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	91F197
1.59	**9,10-Anthraquinone, 1,4-diamino-2-methoxy-**								
	$CHCl_3$	air[a]	0.01^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$	86E640
	2-PrOH/ H_2O (5:1)	air	0.05^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.80; $\lambda_{exc} = 545$ nm.	88F582
1.60	**9,10-Anthraquinone, 1,4-diamino-2-[4-(phenylaminosulfonyl)phenoxy]-**								
	$CHCl_3$	air[a]	0.01^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.61	**9,10-Anthraquinone, 1,2-dihydroxy-**								
	$CHCl_3$	air[a]	0.01^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.62	**9,10-Anthraquinone, 1,8-dihydroxy-**								
	C_5H_5N	O_2 var.	0.84^T				CP/Oc-14	A = α-Terpinene.	587004
	CH_3CN	air	0.70^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	90D185
	DMSO	air	0				CP/LI-56	S′ = RB. No detectable phosphorescence.	90D185
	EtOH	air	0.43^T				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$.	90D185
1.63	**9,10-Anthraquinone, 1-hydroxy-**								
	$CHCl_3$	air[a]	0.2^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.64	**9,10-Anthraquinone, 2-hydroxy-**								
	$CHCl_3$	air[a]	0.03^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.77^b$. $P_T^{O_2} = 1$.	86E640
1.65	**9,10-Anthraquinone, 1,4,5,8-tetraamino-**								
	2-PrOH/ H_2O (5:1)	air	0.10^T				CP/Ac-43	S′ = 1,5-AQ$(NH_2)_2$; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.80; $\lambda_{exc} = 545$ nm.	88F582
1.66	**9,10-Anthraquinone, 1,4,5,8-tetrahydroxy-**								
	$CHCl_3$	air[a]	0.92^T				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.80^b$. $P_T^{O_2} = 1$.	86E640
1.67	**Anthrone**								
	C_6H_6	O_2	0.25^T	0.25			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 1$. Measured $P_T^{O_2} = 1$.	88E449
	C_6H_6	O_2	0.25^T	0.25			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Measured ϕ_Δ = 0.25, $P_T^{O_2} = 1$ and ϕ_F.	88E449

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.68	**Anthrone, 1,8-dihydroxy- (Anthralin)**								
	C_6H_6	air	<0.01				PL/LI-56	S′ = Np; rel. to $\phi_\Delta(S') = 0.55$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} > 0.94$; no detectable luminescence.	89E158
	C_6H_6	air		0.77* 0.64			PR/βCb-59	S′ = BP; TA = Car; rel. to $f_\Delta{}^T(S') = 0.29$; used $\varepsilon_T(S) = 4770$ L mol^{-1} cm^{-1} at 560 nm, $\varepsilon_T(S')$ = 7630 L mol^{-1} cm^{-1} at 532.5 nm. $P_T^{O_2} > 0.94$.	89E158
	DMSO	air	0				CP/LI-56	S′ = RB. No detectable phosphorescence.	90D185
	EtOH	air	0				CP/LI-56	S′ = RB. No detectable phosphorescence.	90D185
	CH_3CN	air	0				CP/LI-56	S′ = RB. HCl added; no detectable phosphorescence.	90D185
1.69	**Anthrone, 1,8-dihydroxy-, conjugate base**								
	CH_3CN	air	≥0.11				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.80^b$. 15% quenching of singlet oxygen by S.	90D185
1.70	**Azulene**								
	C_6H_6	air[a]		0	0		CP/Ac-14,38	$\lambda_{exc} = 546.1$ nm. A = DMA and DMBA.	69F388
1.71	**Benzaldehyde**								
	MeOH	O_2	0.61				CP/Oc-14	A = TME; $\lambda_{exc} = 283$-373 nm.	70F735
	MeOH	O_2	<0.58				CP/Oc-14	A = 2,5-DMF; $\lambda_{exc} = 283$-373 nm. Some free radical reaction occurs.	70F735
1.72	**Benz[*a*]anthracene**								
	$C_6H_5CH_3$	1.2×10^{-3}				0.95	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.85$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 15{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.95$.	83F075
	$C_6H_5CH_3$	1.2×10^{-3}	1.4				PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; λ_{exc} = 347 nm.	82E010
	C_6H_5CN	1.2×10^{-3}				0.21	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.75$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 12{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.21$.	83F075
1.73	**Benz[*a*]anthracene, 9,10-dimethyl-**								
	C_6H_6	air[a]	0.69^T	1.0		1.0	CP/Ac-14,40	A = S. Assumed $f_T^{O_2} = 1$; $f_\Delta{}^T + f_\Delta{}^S$ from ϕ_Δ when $P_S^{O_2} = 1$; $\phi_T f_\Delta{}^T = \phi_\Delta$ when $P_S^{O_2} = 0$.	767422
	C_6H_6	air[a]			≤0.34	≤1.3	CP/Ac-14,38	A = S. Assumed $f_\Delta{}^T = 1$ and $f_T^{O_2} = 1$.	76F905
	C_6H_6	O_2 var.					CP/Ac-14,38	A = S; $\lambda_{exc} = 365$ nm. $\phi_T f_\Delta{}^T / (f_\Delta{}^T + f_\Delta{}^S)$ = 0.66.	68F286
1.74	**Benzene, 5-chloro-1,3-dimethoxy-**								
	D_2O	air	0.0092				PL/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.78$; $\lambda_{exc} = 308$ nm.	91A341
1.75	**Benzene, 1,3,5-triphenyl-**								
	n-C_6H_{14}	air	0.4^T				PL/Ad-43	S′ = An; A = DPBF; rel. to $\phi_\Delta(S') = 1$; λ_{exc} = 264 nm. $P_T^{O_2} = 1$.	82E258
1.76	**Benzenebutanoic acid, α-amino-2-(formylamino)-γ-oxo- (*N*-Formylkynurenine)**								
	H_2O pH = 7.4	air	0.17				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; λ_{exc} = 332 nm. RNO as monitor of P.	91R141
	H_2O pH = 7.5	0.15×10^{-3}	0.15	0.75			CP/Ac-14,42	A = TrpH; meas. $\phi_T(S) = 0.20^f$; λ_{exc} = >320 nm. $P_S^{O_2} = 0$; with $k_d = k_\Delta + k_S[S]$.	78A358
	H_2O pH = 7.5	2×10^{-3}	0.17	0.85			CP/Ac-14,42	A = TrpH; meas. $\phi_T(S) = 0.20^f$; λ_{exc} = >320 nm. $P_S^{O_2} = 0$; in presence of Type I photooxidation; with $k_d = k_\Delta + k_S[S]$.	78A358
1.77	**Benzenebutanoic acid, α,2-diamino-3-hydroxy-γ-oxo- (3-Hydroxykynurenine)**								
	D_2O pD = 7	air	0.003				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 337$ nm.	87F290

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.77	**Benzenebutanoic acid, α,2-diamino-3-hydroxy-γ-oxo- (3-Hydroxykynurenine)**—Continued								
	H_2O pH = 7.4	air	0				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; λ_{exc} = 360 nm. RNO as monitor of P.	91R141
1.78	**Benzenebutanoic acid, α,2-diamino-γ-oxo- (Kynurenine)**								
	D_2O pD = 7	air	0.006				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.30$.	87F290
	H_2O pH = 7.4	air	0				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; λ_{exc} = 360 nm. RNO as monitor of P.	91R141
1.79	**1,3-Benzenediol (Resorcinol)**								
	diox	air	0.12				PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; λ_{exc} = 308 nm.	91A341
1.80	**1,3-Benzenediol, 4-chloro-**								
	diox	O_2	0.05				PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; λ_{exc} = 308 nm.	91A341
1.81	**1,4-Benzenediol (Hydroquinone)**								
	diox	air	0.21				PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; λ_{exc} = 308 nm. May be from quinone contaminents.	91A341
1.82	**1,4-Benzenediol, chloro-**								
	diox	O_2	0.04				PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; λ_{exc} = 308 nm. May be from quinone contaminents.	91A341
1.83	**Benzil**								
	C_6H_6	O_2	0.57	0.62			CP/Pa-14,42	A = 1,2-Dimethylcyclohexene; λ_{exc} = 366 nm; used $\phi_T(S) = 0.92^d$. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.84	**Benzil, 4,4′-dichloro-**								
	C_6H_6	O_2	0.23				CP/Pa-14	A = 1,2-Dimethylcyclohexene; λ_{exc} = 366 nm. P – 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.85	**Benzil, 4,4′-dimethoxy-**								
	C_6H_6	O_2	0.27				CP/Pa-14	A = 1,2-Dimethylcyclohexene; λ_{exc} = 366 nm. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.86	**Benzil, 2,2′,4,4′,6,6′-hexamethyl-**								
	C_6H_6	O_2	0.06				CP/Pa-14	A = 1,2-Dimethylcyclohexene; λ_{exc} = 366 nm. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.87	**Benzo[1,2,3-*kl*:4,5,6-*k′l′*]dixanthene (BDX)**								
	$C_6H_5CH_3$	air				1.9	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta{}^T = 0.08$.	84F197
1.88	**Benzophenone (BP)**								
	C_6D_6	air	0.29^T	0.29			PL/LI-56,42	λ_{exc} = 355 nm; used $\phi_T(S) = 1$. S′ = BP in benzene, used $\phi_\Delta(S')$ in benzene = 0.29.	88E657
	C_6H_6	air or O_2	0.35	0.35				See Table 4.	

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.88	**Benzophenone (BP)**—Continued								
	C_6H_6	air	0.36^T	~0.37			PL/Hp-52,42	λ_{exc} = 337 nm. Measured ϕ_T, assumed $P_T^{O_2}$ = 1.	91F198
	C_6H_6	air	0.31^T	0.31			PL/LI-57,42	S′ = Pz; rel. to $\phi_\Delta(S')$ = 0.83; used $\phi_T(S)$ = 1.0. $P_T^{O_2}$ = 1.	90A328
	C_6H_6	air	 0.29^T	0.33* 0.29			PL/LI-60,42	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S')$ = 0.55; λ_{exc} = 355 nm; used $\phi_T(S) = 1^c$.	87E234
	C_6H_6	air	0.29^T	0.29			PL/LI,St-55,42	S′ = Ac; rel. to $f_\Delta^T(S')$ = 1.0; λ_{exc} = 355 nm; used $\phi_T(S) = 1^e$, $\varepsilon_T(S)$ = 7630 L mol^{-1} cm^{-1} at 532 nm. Used $\varepsilon_T(S')$ = 24,300 L mol^{-1} cm^{-1} at 440 nm, $P_T^{O_2}$ (S) = 0.96, $P_T^{O_2}$ (S′) = 1.	84E373
	C_6H_6	1.9×10^{-3}	0.54				CP/Ac-46	A = DMA; λ_{exc} = 365 nm. Assumed $f_T^{O_2}$ = 1; measured $\phi_\Delta(S)/\phi_\Delta(S')$ = 1.1, 1.6 and 1.8 for S′ = DMA, Rub and DPBF, resp.; solvent may contain impurities.	81F364
	C_6H_6	O_2	0.35^T	0.35			PL/Hp-52,42	λ_{exc} = 355 nm; used $\phi_T(S)$ = 1. Measured ϕ_Δ = 0.35, $P_T^{O_2}$ = 1 and ϕ_F.	88E449
	C_6H_6	O_2	0.35^T	0.35			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S')$ = 0.83; used $\phi_T(S)$ = 1. Measured $P_T^{O_2}$ = 1.	88E449
	C_6H_6	O_2	0.39^T	0.39			PL/Ad-49,42	A = DPBF; AC = S; λ_{exc} = 337 nm; used k_d = 4.0×10^4 s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC)$ = 1, $\varepsilon_T(AC)$ = 7600 L mol^{-1} cm^{-1} at 532 nm.	84F005
	C_6H_6	9.0×10^{-3}	0.90	1	0		CP/Ac-46	A = DMA; λ_{exc} = 365 nm; used $\phi_T(S)$ = 1.0. Assumed $f_T^{O_2}$ = 1; measured $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.90, 1.0 and 1.13 for S′ = DMA, Rub and DPBF, resp.; solvent may contain impurities.	81F364
	C_6H_6	O_2	0.4^T	0.4			PR/Ad,St-49,42	A = DPBF; used $\phi_T(S)$ = 1.0, $\varepsilon_T(S)$ = 7630 L mol^{-1} cm^{-1} at 532 nm. Measured $G(^3S^*)$.	78E263
	$CDCl_3$	~1.16×10^{-2}	0.55^T	0.55			PL/Ad,St-49,42	A = DPBF; AC = S; λ_{exc} = 337 nm; used $\phi_T(S) = 1^f$, $\varepsilon_T(S)$ = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410
	CH_3CN	O_2	0.37^T	0.37			PL/Ad,St-49,42	A = DPBF; AC = S; λ_{exc} = 337 nm; used k_d = 2.5×10^4 s^{-1}, $k_A = 1.0 \times 10^9$ L mol^{-1} s^{-1}, $\phi_T(S) = 1^d$, $\varepsilon_T(AC)$ = 6500 L mol^{-1} cm^{-1} at 520 nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	MeOH	O_2	<0.50				CP/Oc-14	A = 2,5-DMF; λ_{exc} = 283-373 nm. Some free radical reaction occurs.	70F735
1.89	**Benzophenone, 4,4′-bis(dimethylamino)-**								
	C_6H_6	O_2	 0.41^T	0.37* 0.41			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S')$ = 0.39; meas. $\phi_T(S) = 1^e$; λ_{exc} = 337 nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.16^T	0.35			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S')$ = 0.37; meas. $\phi_T(S) = 0.47^e$; λ_{exc} = 337 nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
1.90	**Benzophenone, 4,4′-dimethoxy-**								
	C_6H_6	O_2	 0.34^T	0.30* 0.34			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S')$ = 0.39; meas. $\phi_T(S) = 1^e$; λ_{exc} = 337 nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.40^T	0.40			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta^T(S')$ = 0.37; meas. $\phi_T(S) = 1^e$; λ_{exc} = 337 nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.91	**Benzophenone, 4-fluoro-**								
	C_6H_6	O_2	 0.43^T	0.39* 0.43			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta{}^T(S') = 0.39$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.44^T	0.44			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta{}^T(S') = 0.37$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
1.92	**Benzophenone, 4-(trifluoromethyl)-**								
	C_6H_6	O_2	 0.42^T	0.38* 0.42			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta{}^T(S') = 0.39$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
	CH_3CN	O_2	0.54^T	0.54			PL/Ad,TAt-50,42	S′ = BP; A = DPBF; TA = 1-MeNp; rel. to $f_\Delta{}^T(S') = 0.37$; meas. $\phi_T(S) = 1^e$; $\lambda_{exc} = 337$ nm. Showed $P_T^{O_2}$ (S and S′) >0.95.	85A268
1.93	**Benzo[*a*]phenothiazine**								
	CH_3CN	O_2	~0.2				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.94	**Benzo[*b*]phenothiazine**								
	CH_3CN	O_2	0.19				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.95	**Benzo[*c*]phenothiazine**								
	CH_3CN	O_2	0.17				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.96	**1-Benzopyran-4-one, 2,3-diphenyl- (3-Phenylflavone)**								
	C_6H_6	$(0.6\text{-}5.5) \times 10^{-3}$	0.4^T	0.8			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S') = 0.4$; meas. $\phi_T(S) = 0.5^f$; $\lambda_{exc} = 337$ nm.	86E567
1.97	**1-Benzopyran-4-one, 3-hydroxy-2-phenyl- (3-Hydroxyflavone)**								
	n-C_7H_{16}	2.3×10^{-3}	0.18				PL/LI-56	S′ = Np; TD = BP; rel. to $f_\Delta{}^T(S') = 1.0$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, $\phi_{et} = 1$.	89E365
1.98	**1-Benzopyran-4-one, 2-phenyl- (Flavone)**								
	C_6H_6	$(0.6\text{-}5.5) \times 10^{-3}$	0.5* 0.6^T	 0.7			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S') = 0.4$; meas. $\phi_T(S) = 0.9^f$; $\lambda_{exc} = 337$ nm.	86E567
1.99	**[1]Benzopyrano[6,7,8-*ij*]quinolizin-11-one, 2,3,6,7-tetrahydro-9-methyl-**								
	C_6H_6	air	0.08				CP/Pa-14	A = Rub; $\lambda_{exc} = 365$ nm.	87F569
1.100	**1,4-Benzoquinone, 2,6-diphenyl-**								
	$C_6H_5CH_3$	O_2	1.1				PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.82$; $\lambda_{exc} = 530$ nm.	88E124
1.101	**1,4-Benzoquinone, 2,6-diphenyl-, complex with Triphenylamine**								
	$C_6H_5CH_3$	O_2	0.14				PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.82$; $\lambda_{exc} = 530$ nm. Triplet ion-radical pair.	88E124
1.102	**1,4-Benzoquinone, tetrachloro- (Chloranil)**								
	C_6H_6	$\to\infty$	0.85* 0.73^T	 0.73			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$.	91E444
	$CHCl_3$	$\to\infty$	0.75^T	0.75			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. rel. to S′ in benzene, cor. for solvent k_T.	91E444
	$C_6H_5CH_3$	$\to\infty$	0.35^T	0.35			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. rel. to S′ in benzene, cor. for solvent k_T.	91E444
1.103	**1,4-Benzoquinone, tetrachloro-, complex with Anisole**								
	C_6H_6	$\to\infty$	0.06* 0.05^T	 0.05			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Triplet ion-radical pair.	91E444

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.104	**1,4-Benzoquinone, tetrachloro-, complex with Durene**								
	C_6H_6	$\rightarrow\infty$	0.22* 0.19^T	 0.19			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Triplet ion-radical pair.	91E444
1.105	**1,4-Benzoquinone, tetrachloro-, complex with Hexamethylbenzene**								
	C_6H_6	$\rightarrow\infty$	0.23* 0.20^T	 0.20			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Triplet ion-radical pair.	91E444
1.106	**1,4-Benzoquinone, tetrachloro-, complex with 1,2,3-Trimethoxybenzene**								
	C_6H_6	$\rightarrow\infty$	0.09* 0.08^T	 0.08			PL/LI-56,42	S′ = BP; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Triplet ion-radical pair.	91E444
1.107	**1,4-Benzoquinone, tetramethyl- (Duroquinone)**								
	$C_6H_5CH_3$	1.2×10^{-3}				1.0	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 347$ nm; used $\varepsilon_T(S) = 7600$ L mol^{-1} cm^{-1} at 490 nm. $n_\Delta = 1.0$.	83F075
1.108	**Biacetyl**								
	C_6H_6	O_2	0.57^T	0.57			CP/Pa-14,42	A = 1,2-Dimethylcyclohexene; $\lambda_{exc} = 366$ nm; used $\phi_T(S) = 1^d$. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.109	**Bicyclo[2.2.1]heptane-2,3-dione, 1,7,7-trimethyl- (Camphoroquinone, CQ)**								
	C_6H_6	O_2	0.84				CP/Pa-14	A = 1,2-Dimethylcyclohexene; $\lambda_{exc} = 366$ nm. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.110	**Bicyclo[2.2.1]heptane-2-thione (Thionorcamphor)**								
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1$. [S] $\rightarrow$ 0, ϕ_Δ = 0.56 at [S] = 0.01 mol L^{-1}.	83F028 82F140
1.111	**Bicyclo[2.2.1]heptane-2-thione, 3,3-dimethyl- (Thiocamphenilone)**								
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1.0$. [S] $\rightarrow$ 0, ϕ_Δ = 0.59 at [S] = 0.01 mol L^{-1}.	83F028 82F140
1.112	**Bicyclo[2.2.1]heptane-2-thione, 1,3,3,7,7-pentamethyl- (3,3-Dimethylthiocamphor)**								
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1.0$. [S] $\rightarrow$ 0, ϕ_Δ = 0.91 at [S] = 0.01 mol L^{-1}.	83F028 82F140
1.113	**Bicyclo[2.2.1]heptane-2-thione, 1,3,3-trimethyl- (Thiofenchone)**								
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1.0$. [S] $\rightarrow$ 0, ϕ_Δ = 0.83 at [S] = 0.01 mol L^{-1}.	83F028 82F140
1.114	**Bicyclo[2.2.1]heptane-2-thione, 1,7,7-trimethyl- (Thiocamphor)**								
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1.0$. [S] $\rightarrow$ 0, ϕ_Δ = 0.87 at [S] = 0.01 mol L^{-1}.	83F028 82F140
1.115	**Biphenyl**								
	c-C_6H_{12}	$\rightarrow\infty$	0.73^{ST}				PL/LI-56	S′ = Py; rel. to $\phi_\Delta(S') = 0.81$; $\lambda_{exc} = 355$ nm.	91E297
	c-C_6H_{12}	air		1.0			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta{}^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234
	C_6H_6	air		0.51* 0.45			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta{}^T(S') = 0.55$; $\lambda_{exc} = 355$ nm.	87E234
	C_6H_6	O_2		0.6			PR/Ad,St-49	A = DPBF; used $\phi_T(S) = 0.81$, $\varepsilon_T(S) = 27{,}100$ L mol^{-1} cm^{-1} at 367 nm. Measured $G(^3S^*)$.	78E263
	CH_3CN	$\rightarrow\infty$	0.27^{ST}				PL/LI-56	S′ = DCA; rel. to $\phi_\Delta(S') = 2.0$; $\lambda_{exc} = 355$ nm.	91E297

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.115	**Biphenyl**—Continued								
	CH_3CN	air		1.0			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234
	H_2O (mic)	O_2		1.0			PL/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234
1.116	**Bis(2,2′-bipyridine)bis(cyano)ruthenium(II)**								
	MeOH	O_2	0.79^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.117	**Bis(1,10-phenanthroline)-4,7-di(sulfonatophenyl)-1,10-phenanthrolineosmium(II)**								
	MeOH	O_2	0.74^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.118	**Bis(1,10-phenanthroline)-4,7-di(sulfonatophenyl)-1,10-phenanthrolineruthenium(II)**								
	MeOH	O_2	0.82^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.119	**5-Bromo-1,10-phenanthrolinebis(1,10-phenanthroline)ruthenium(II) ion**								
	MeOH	O_2	0.80^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.120	**Carbon sixty-atom molecule (Buckminsterfullerene)**								
	$C_6H_5CH_3$	air	1.0^T	1.0			PL/Hp-53,42	$\lambda_{exc} = 510$ nm; used $\phi_T(S) = 1$.	91E368
	C_6H_6	air	0.92^T				PL/Hp-52	$\lambda_{exc} = 530$ nm.	91E534
	C_6H_6	air	0.98^T				PL/Hp-52	$\lambda_{exc} = 340$ nm.	91E534
	C_6H_6	air	0.96^T				PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.62$; $\lambda_{exc} = 532$ nm. $P_T^{O_2} = 1$.	91E003
	C_6H_6	air	0.76^T				PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.62$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	91E003
	C_6H_6	air	0.76^T				PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	91E003
1.121	**Carbon seventy-atom molecule**								
	C_6H_6	air	0.81^T	~1			PL/LI-56,42	S′ = TPP; rel. to $\phi_\Delta(S') = 0.62$; meas. $\phi_T(S) = 0.9$; $\lambda_{exc} = 355$, 532 nm.	91E594
1.122	**β-*apo*-14′-Carotenal (*all-trans*-C_{22} aldehyde)**								
	c-C_6H_{12}	air					PL/Ad-49,39	A = DPBF; AC = S; $\lambda_{exc} = 337$ nm; used $k_d = 5 \times 10^4$ s^{-1}, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(AC) = 121000$ L mol^{-1} cm^{-1} at 470 nm. $f_\Delta^T P_T^{O_2} + P_S^{O_2} f_\Delta^S / \phi_T^{O_2} = 1.4$.	85F041
	c-C_6H_{12}	O_2	0.48^T	~1			PL/Ad-49,42	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $k_d = 5.0 \times 10^4$ s^{-1}, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.54^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	84F005
1.123	**5-Chloro-1,10-phenanthrolinebis(1,10-phenanthroline)ruthenium(II) ion**								
	MeOH	O_2	0.81^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.124	**Chrysene**								
	c-C_6H_{12}	$\to \infty$	0.65^{ST}				PL/LI-56	S′ = Py; rel. to $\phi_\Delta(S') = 0.81$; $\lambda_{exc} = 355$ nm.	91E297
	n-C_6H_{14}	air	0.3				PL/Ad-43	S′ = An; A = DPBF; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 264$ nm. $P_T^{O_2} = 1$.	82E258
	$C_6H_5CH_3$	1.2×10^{-3}	1.2				PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	82E010
	C_6H_6	O_2	0.66				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$. Measured $P_T^{O_2} = 0.99$ and $\phi_T^{O_2} = \phi_T(S)$. Authors assume $f_\Delta^S = 0$ and $\phi_T(S) = 0.81$ to give $f_\Delta^T = 0.81$ but $P_S^{O_2}$ is estimated to be >0.8 so values of f_Δ^S and f_Δ^T are indeterminable.	88E449

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.124	**Chrysene—Continued**								
	C_6H_6	O_2	0.69				PL/Hp-52	λ_{exc} = 355 nm. Measured ϕ_Δ = 0.68, $P_T^{O_2}$ = 0.99 and $\phi_T^{O_2} = \phi_T(S)$ and ϕ_F. Authors assume f_Δ^S = 0 and $\phi_T(S)$ = 0.81 to give f_Δ^T = 0.85 but $P_S^{O_2}$ is estimated to be >0.8 so values of f_Δ^S and f_Δ^T are indeterminable.	88E449
	CCl_4	air	0.2				MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S')$ = 0.7; λ_{exc} = 652 nm.	83E813
	CH_3CN	$\rightarrow \infty$	0.30^{ST}				PL/LI-56	S′ = DCA; rel. to $\phi_\Delta(S')$ = 2.0; λ_{exc} = 355 nm.	91E297
	EtOH	O_2	0.90				CP/Ac-43	S′ = MB^+; A = Bu_2S; rel. to $\phi_\Delta(S')$ = 0.50[b]; λ_{exc} = 313 nm. $P_T^{O_2}$ = 1.	74F648
1.125	**Chrysene, 2-bromo-**								
	EtOH	O_2	1				CP/Ac-43	S′ = MB^+; A = Bu_2S; rel. to $\phi_\Delta(S')$ = 0.50[b]; λ_{exc} = 313 nm. $P_T^{O_2}$ = 1.	74F648
1.126	**Chrysene, 2-chloro-**								
	EtOH	O_2	1				CP/Ac-43	S′ = MB^+; A = Bu_2S; rel. to $\phi_\Delta(S')$ = 0.50[b]; λ_{exc} = 313 nm. $P_T^{O_2}$ = 1.	74F648
1.127	**Coronene**								
	$C_6H_5CH_3$	1.2×10^{-3}	0.90				PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S')$ = 1.0; λ_{exc} = 347 nm.	82E010
	C_6H_6	1.9×10^{-3}	0.94				CP/Ac-46	λ_{exc} = 365 nm. Assumed $f_T^{O_2}$ = 1; measured $\phi_\Delta(S)/\phi_\Delta(S')$ = 1.80 and 3.3 for S′ = A = DMA and DPBF, resp.	81F364
	C_6H_6	9.0×10^{-3}	0.97	≥0.95	0		CP/Ac-46	λ_{exc} = 365 nm; used $\phi_T(S)$ = 0.56. Assumed $f_T^{O_2}$ = 1; measured $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.95 and 1.25 for S′ = A = DMA and DPBF, resp.	81F364
1.128	**Coumarin**								
	D_2O	air[a]	0.01				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S')$ = 0.3; λ_{exc} = 337 nm.	86F144
	MeOH	air[a]	0.03				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S')$ = 0.4; λ_{exc} = 337 nm.	86F144
1.129	**Coumarin, 7-(diethylamino)-4-methyl-**								
	C_6H_6	air	0.08				CP/Pa-14	A = Rub; λ_{exc} = 365 nm.	87F569
1.130	**Cycloheptatriene**								
	C_6H_6	2×10^{-3}		0.80* 0.66			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S')$ = 0.29; λ_{exc} = 355 nm. Measured $P_T^{O_2}$.	89A235
1.131	**1,3-Cyclohexadiene**								
	C_6H_6	8.7×10^{-4}		0.48* 0.40			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S')$ = 0.29; λ_{exc} = 355 nm. Measured $P_T^{O_2}$.	89A235
1.132	**2-Cyclohexenethione, 3,5,5-trimethyl-**								
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.9^T	0.9			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S')$ = 1; meas. $\phi_T(S)$ = 1; λ_{exc} = 532 nm. Used $P_S^{O_2}$ = 0, $P_T^{O_2}$ = 1.	86A240
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.5* 0.6^T	 0.6			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.4; meas. $\phi_T(S)$ = 1; λ_{exc} = 337 nm. Used $P_S^{O_2}$ = 0, $P_T^{O_2}$ = 1	86A240
1.133	**Cyclopentadiene**								
	C_6H_6	8.7×10^{-4}		0.90* 0.75			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S')$ = 0.29; λ_{exc} = 355 nm. Measured $P_T^{O_2}$.	89A235
1.134	**7-Dehydrocholesterol**								
	C_6H_6	air		0.96* 0.85			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S')$ = 0.55; λ_{exc} = 355 nm.	88E575

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.135	**Diacenaphtho[1,2-*b*:2′,1′-*d*]thiophene (DNT)**								
	C_6H_6	air[a]	0.46				PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$. Supersedes 0.98 quoted in [83F172].	92F013
	CH_3CN	air[a]	0.39				PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$. Supersedes 0.62 quoted in [83F172].	92F013
1.136	**2,7-Diazapyrene, 2,7-dimethyl-**								
	D_2O	O_2	0.14				PL/LI-56	S′ = $ZnTMpyP^{4+}$; rel. to $\phi_\Delta(S') = 0.88$; meas. $\phi_T(S) = 0.17$; $\lambda_{exc} = 355$ nm.	91R201
1.137	**Dibenz[*a,h*]anthracene**								
	$C_6H_5CH_3$	1.2×10^{-3}				1.0	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.9$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 13{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 1.0$.	83F075
	C_6H_5CN	1.2×10^{-3}				0.23	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.9$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 10{,}500$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.23$.	83F075
1.138	**Dibenzo[*def,mno*]chrysene (Anthanthrene)**								
	C_6H_6	O_2 var.		1			CP/Ac-14,38	$\lambda_{exc} = 435.8$ nm. A = DMA and DMBA; results consistent with $f_\Delta^S << f_\Delta^T$; assumed $f_T^{O_2} = 1$; measured $\phi_T f_\Delta^T/(f_\Delta^T + f_\Delta^S) = 0.22$.	69F388
1.139	**Dibenzo[*a,o*]perylene, 7,16-diphenyl- (Mesodiphenylhelianthrene. MDH)**								
	c-C_6H_{12}	air	0.33				CP/Ac-14	A = S; $\lambda_{exc} = 578$ nm. Recalculated using $f_r^A = 0.30$.	83F406
	n-C_5H_{12}	air	0.28				CP/Ac-A.18	A = S; $\lambda_{exc} = 546$ nm. $f_r^A = 0.30$	87F480
	$C_6H_5CH_3$	air	0.67				CP/Ac-14,38	A = S; meas. $\phi_T(S) = 0.52$; $\lambda_{exc} = 578$ nm. $f_T^{O_2} = 1, f_r^A = 0.30$, $[O_2]$ varied, $(f_\Delta^S + f_\Delta^T f_T^{O_2}) = 1.2$.	87F479
	$C_6H_5CH_3$	$(2\text{-}9) \times 10^{-3}$				0.35	CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta^T = 0.16$.	84F197
	CCl_4	air	0.50				CP/Ac-14	A = S. $f_T^{O_2} = 1, f_r^A = 0.30$, $[O_2]$ varied.	87F479
	CH_3COCH_3	air	0.67				CP/Ac-A.18	A = S; $\lambda_{exc} = 546$ nm. $f_r^A = 0.30$	87F480
	$CHCl_3$	air	0.43				CP/Ac-14	A = S; $\lambda_{exc} = 578$ nm. Recalculated using $f_r^A = 0.30$.	83F406
	CS_2	air	0.33				CP/Ac-14	A = S; $\lambda_{exc} = 578$ nm. Recalculated using $f_r^A = 0.30$.	83F406
	MeOH /$C_6H_5CH_3$ (97:3)	air	0.50				CP/Ac-A.18	A = S; $\lambda_{exc} = 546$ nm. $f_r^A = 0.30$	87F480
	$C_6H_5CH_2OH$	air	0.43				CP/Ac-A.18	A = S; $\lambda_{exc} = 546$ nm. $f_r^A = 0.30$	87F480
	m-Cresol	air	0.42				CP/Ac-A.18	A = S; $\lambda_{exc} = 546$ nm. $f_r^A = 0.30$	87F480
1.140	**Dicyanobis(1,10-phenanthroline)ruthenium(II)**								
	MeOH	O_2	0.68^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.141	**(4,7-Diphenyl-1,10-phenanthroline)bis(1,10-phenanthroline)osmium(II) ion**								
	MeOH	O_2	0.78^T				CL/Oc-14	A = TME; $\lambda_{exc} = 488$ nm.	777221
1.142	**Ergosterol**								
	C_6H_6	5.5×10^{-4}		0.96* 0.85			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 0.55$; $\lambda_{exc} = 355$ nm.	87E055
	C_6H_6	8.7×10^{-4}		1.0* 0.83			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S') = 0.29$; $\lambda_{exc} = 355$ nm. Measured $P_T^{O_2}$.	89A235

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.143	**9,10-Ethenoanthracene, 9-acetyloxy-11,12-dibenzoyl-9,10-dihydro-**								
	C_6H_6	air[a]	0.62^T	0.9			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.7^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.144	**9,10-Ethenoanthracene, 11,12-dibenzoyl-9,10-dihydro-9,10-dimethoxy-**								
	C_6H_6	air[a]	0.17^T	0.9			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.2^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.145	**9,10-Ethenoanthracene, 11,12-dibenzoyl-9,10-dihydro-9-hydroxy-**								
	C_6H_6	air[a]	0.66^T	0.9			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.7^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.146	**9,10-Ethenoanthracene, 11,12-dibenzoyl-9,10-dihydro-9-methoxy-**								
	C_6H_6	air[a]	0.57^T	0.9			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.6^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.147	**9,10-Ethenoanthracene, 11,12-dibenzoyl-9-ethyl-9,10-dihydro-**								
	C_6H_6	air[a]	0.57^T	0.9			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.6^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.148	**9,10-Ethenoanthracene-9-carbonitrile, 11,12-dibenzoyl-9,10-dihydro-**								
	C_6H_6	air[a]	0.44^T	0.6			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.7^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.149	**9,10-Ethenoanthracene-9-carboxaldehyde, 11,12-dibenzoyl-9,10-dihydro-**								
	C_6H_6	air[a]	0.41^T	0.7			PL/Ad-49,42	A = DPBF; AC = BP; meas. $\phi_T(S) = 0.6^f$; $\lambda_{exc} = 337$ nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	85B073
1.150	**Fluoranthene**								
	n-C_6H_{14}	air	0.5				PL/Ad-43	S′ = An; A = DPBF; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 264$ nm. $P_T^{O_2} = 1$.	82E258
1.151	**Fluorene**								
	c-C_6H_{12}	air		1.0			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234
	C_6H_6	air		0.74* 0.66			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 0.55$; $\lambda_{exc} = 355$ nm.	87E234
	CH_3CN	air		1.0			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234
	D_2O (mic)	O_2		1.0			PL/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm. [SDS] = 0.2-0.5 mol L^{-1}.	87E234
	MeOH	O_2	0.09				CP/Oc-14	A = TME; $\lambda_{exc} = 283$-373 nm.	70F735
	MeOH	O_2	0.10				CP/Oc-14	A = 2,5-DMF; $\lambda_{exc} = 283$-373 nm.	70F735
	diox	air		1.0			PL/LI-60	S′ = Np; TD = p-MAP; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 355$ nm.	87E234

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.152	**Fluorene, 9-(phenylsulfonyl)-**								
	tert-BuOH	O_2	0.035				CP/Pa-14	A = S; P = 9-Fluorenone; λ_{exc} = 360 nm.	707250
1.153	**9-Fluorenone**								
	C_6H_6	O_2	0.82^T	0.88			PL/Hp-52,42	λ_{exc} = 355 nm; used $\phi_T(S) = 0.93$. Measured $\phi_\Delta = 0.82$, $P_T^{O_2} = 1$ and ϕ_F.	88E449
	C_6H_6	O_2	0.83^T	0.89			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 0.93$. Measured $P_T^{O_2} = 1$.	88E449
	C_6H_6	air	0.7^T	0.8			PL/LI,St-55,42	S′ = Ac; rel. to $f_\Delta^T(S') = 1.0$; λ_{exc} = 355 nm; used $\phi_T(S) = 0.93^c$.	84E287
	CD_3OD	air[a]	0.02				CP/LI-56	S′ = RB; rel. to $\phi_\Delta(S') = 0.76$. $P_T^{O_2} = 1$; measured ratio of I_a at $\lambda_{exc}(S) = 367$ and $\lambda_{exc}(S') = 547$ nm.	91F023
	MeOH	O_2	0.07				CP/Oc-14	A = 2,5-DMF; λ_{exc} = 283-373 nm.	70F735
	MeOH	O_2	0.03				CP/Oc-14	A = TME; λ_{exc} = 283-373 nm.	70F735
1.154	**Fluorescein dianion**								
	c-C_6H_{12} (mic)	air	0.15				CP/Ac-14	A = DPBF. Reverse micelles [DAP] = 8×10^{-2} mol L^{-1}; ϕ_Δ decreased with added H_2O.	80N092
	EtOH	air	0.03				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	EtOH	air[a]	0.13				CP/Ac-14	A = DPBF; λ_{exc} = 488 nm. Assumed $f_r^A = 2$.	76R193
	H_2O pH = 7	air	0.03				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
	H_2O	air[a]	0.06				CP/Ac-43,42	S′ = MB^+; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.52$; used $\phi_T(S) = 0.05$. Assumed $P_T^{O_2} = 1$.	737339
1.155	**Fluorescein, dibromo-, dianion**								
	EtOH	air	0.29				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	H_2O pH = 7	air	0.42				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
1.156	**Fluorescein, 4′,5′-dibromo-2′,7′-dinitro-, dianion (Eosin B)**								
	EtOH	air	0.37				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	H_2O pH = 7	air	0.52				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
1.157	**Fluorescein, 2′,7′-dibromo-4′-(hydroxymercuri)-, dianion (Mercurochrome)**								
	EtOH	air	0.14	1.0			PL/LI-56,42	S′ = RB; rel. to $\phi_\Delta(S') = 0.76$; meas. $\phi_T(S) = 0.14$.	92E001
	MeOH	O_2	~0.1				CP/Oc-43	S′ = Eos; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.4$.	90F289
1.158	**Fluorescein, 2′,7′-dichloro-, dianion**								
	EtOH	air	0.04				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	H_2O pH = 7	air	0.07				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
	H_2O (mic)	air	0.06				CP/Ac-44	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76^b$. [SDS] = 0.1 mol L^{-1}.	86N209
	H_2O (mic)	air	0.03				CP/Ac-44	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76^b$. [CTAB] = 0.1 mol L^{-1}.	86N209
1.159	**Fluorescein, 4′,5′-dichloro-, dianion**								
	EtOH	air	0.04				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	H_2O pH = 7	air	0.07				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
1.160	**Fluorescein, diiodo-, dianion**								
	EtOH	air	0.33				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.160	**Fluorescein, diiodo-, dianion**—Continued								
	H_2O pH = 7	air	0.48				CP/Ac-44	S′ = Eos; rel. to ϕ_Δ(S′) = 0.57. A = RNO and ADPA.	83E113
1.161	**Fluorescein, 2′,4′,5′,7′-tetrabromo-, dianion (Eosin Y)**								
	CH_3CN	air	0.57^T				CP/Pa-14	A = DPF; P = 2,5-Diphenylfuran endoperoxide. Method adapted to allow for chain reaction.	87F440
	CH_3COCH_3	air[a]	0.12^T				MP/LI-56	S′ = Ph a; rel. to ϕ_Δ(S′) = 0.8. Reference value in CCl_4.	82Z317
	EtOH	air	0.60^T	0.92			PL/LI-56,42	S′ = RB; rel. to ϕ_Δ(S′) = 0.76; meas. ϕ_T(S) = 0.65.	92E001
	EtOH	9.9×10^{-3}	0.42^T	0.64			CP/Oc-43,42	S′ = MB^+; A = TME; rel. to ϕ_Δ(S′) = 0.50; used ϕ_T(S) = 0.65[d]. Used $P_T^{O_2} = 1$.	84F191
	D_2O pD = 8.2	air	0.58^T				PL/LI-56	rel. to Eos in EtOH, unclear what reference value was used	91N118
	D_2O (mic) pD = 8.2	air	0.24^T				PL/LI-56	rel. to Eos in EtOH, unclear what reference value was used; CPC micelles.	91N118
	H_2O	air[a]	0.57^T	0.89			CP/Ac-43,42	S′ = MB^+; A = 2,5-DMF; rel. to ϕ_Δ(S′) = 0.52; used ϕ_T(S) = 0.64. Assumed $P_T^{O_2} = 1$.	737339
	H_2O (mic)	air	0.54^T				CP/Ac-44	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76[b]. [SDS] = 0.1 mol L^{-1}.	86N209
	H_2O (mic)	air	0.14^T				CP/Ac-44	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76[b]. [CTAB] = 0.1 mol L^{-1}.	86N209
	MeOH	air[a]	0.26^T				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
	MeOH	air[a]	0.30^T				CP/Ac-43	A = DPBF. Rel. to ϕ_Δ = 0.32 for eosin disodium salt in ethanol.	90F251
	MeOH	1.06×10^{-2}	0.42^T	0.64			CP/Oc-43,39	S′ = MB^+; A = TME; rel. to ϕ_Δ(S′) = 0.50; used ϕ_T(S) = 0.66[f]. Used $P_T^{O_2} = 1$.	84F191
1.162	**Fluorescein, 2′,4′,5′,7′-tetrabromo-, benzyl ester, monoanion**								
	MeOH	air[a]	0.36				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.32				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
1.163	**Fluorescein, 2′,4′,5′,7′-tetrabromo-, *p*-isopropylbenzyl ester, monoanion**								
	MeOH	air[a]	0.32				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
	MeOH	air[a]	0.36				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′in ethanol.	90F251
1.164	**Fluorescein, 2′,4′,5′,7′-tetrabromo-, methyl ester, protonated**								
	diox	air[a]	0.26				CP/Ac-43	S′ = *O*-Methyl Rose Bengal methyl ester; A = TPCP; rel. to ϕ_Δ(S′) = 0.70. Soln. contg. 10^{-3} mol L^{-1} HCl.	90F251
	diox	air[a]	0.30				CP/Ac-43	S′ = Eos; A = TPCP; rel. to ϕ_Δ(S′) = 0.32. Soln. contg. 10^{-3} mol L^{-1} HCl. rel. to S′ in ethanol.	90F251
1.165	**Fluorescein, 2′,4′,5′,7′-tetrabromo-, methyl ester, monoanion**								
	MeOH	air[a]	0.32				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.28				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
1.166	**Fluorescein, 2′,4′,5′,7′-tetrabromo-3,4,5,6-tetrachloro-, dianion (Phloxin B)**								
	EtOH	air	0.40				CP/Ac-44	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32.	83E113
	H_2O pH = 7	air	0.65				CP/Ac-44	S′ = Eos; rel. to ϕ_Δ(S′) = 0.57. A = RNO and ADPA.	83E113

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.166	**Fluorescein, 2′,4′,5′,7′-tetrabromo-3,4,5,6-tetrachloro-, dianion (Phloxin B)**—Continued								
	H_2O (mic)	air	0.35				CP/Ac-44	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76^b$. [CTAB] = 0.1 mol L^{-1}.	86N209
	H_2O (mic)	air	0.39				CP/Ac-44	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76^b$. [SDS] = 0.1 mol L^{-1}.	86N209
1.167	**Fluorescein, 2′,4′,5′,7′-tetrachloro-, dianion**								
	EtOH	air	0.05				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$.	83E113
	H_2O pH = 7	air	0.05				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
1.168	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo- (Rose Bengal lactone)**								
	$C_6H_5CH_3$/MeOH (99:1)	air	0.65^T				CP/Ac-14	A = DPBF; $\lambda_{exc} = 546$ nm. $[O_2]$ varied.	87F479
	CCl_4/MeOH (97:3)	air	0.71^T				CP/Ac-14	A = DPBF; $\lambda_{exc} = 546$ nm. $[O_2]$ varied.	87F479
	DMF	air	0.4^T				CP/Ac-14,A18	A = DPBF.	79F412
1.169	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, dianion (Rose Bengal dianion, RB)**								
	tert-BuOH	O_2	0.80^T				CP/Pa-14	A = 9-(Phenylsulfonyl)fluorene anion; P = 9-Fluorenone; $\lambda_{exc} = 546$ nm.	707250
	$C_6H_5CH_2OH$	air	0.95^T				CP/Ac-14	A = DPBF; $\lambda_{exc} = 546$ nm. $[O_2]$ varied.	87F479
	CH_3CN	air	0.54^T				CP/Ac-14	A = DPBF.	90E215
	CH_3CN	air[a]	0.83^T				CP/Pa-14	A = DPF; P = 2,5-Diphenylfuran endoperoxide. Method adapted to allow for chain reaction.	87F440
	EtOH	air[a]	0.68^T	0.8			CP/Pa-43,42	A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 555$ nm; used $\phi_T(S) = 0.90^d$. Rel. to RB in methanol.	86F462
	EtOH	air	0.86^T	1			CP/Ac-44,42	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S') = 0.32$; used $\phi_T(S) = 0.90^d$.	83E113
	D_2O pH = 7.4	air	0.62^T				PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.62$. independent of λ = 308 and 532 nm.	91R177
	D_2O pD = 8.2	air	0.75^T				PL/LI-56	rel. to $\phi_\Delta(S') = 0.75$. rel. to RB in EtOH, cor. for solvent k_r.	91N118
	D_2O (mic) pD = 8.2	air	0.75^T				PL/LI-56	rel. to $\phi_\Delta(S') = 0.75$. rel. to RB in EtOH, cor. for solvent k_r; CPC micelles.	91N118
	H_2O	air or O_2	0.76					See Table 4.	
	H_2O pH = 7	air	0.75^T				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S') = 0.57$. A = RNO and ADPA.	83E113
	H_2O pH = 7.0	O_2		0.76			PL/Ad,St-48	A = ADPA; $\lambda_{exc} = 532$ nm. used $\Delta\varepsilon_T(S)$ = 4900 L mol^{-1} cm^{-1} at 600 nm; assumed $P_S^{O_2}$ = 0 and measured $P_T^{O_2} = 1$.	87A043
	H_2O pH = 7.4	O_2	0.75^T				CP/Ac-14	A = TrpH; $\lambda_{exc} = 540$ nm. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.74^T				CP/Oc-14	A = Im; $\lambda_{exc} = 540$ nm. 1.6% NaCl in phosphate buffer.	88N170
	i-octane/H_2O (96:4) (mic)	O_2	0.81^T	1			PL/Hp-53,42	meas. $\phi_T(S) = 0.78$; $\lambda_{exc} = 355$ nm. Soln. cont. 0.1 mol L^{-1} AOT; meas. $\phi_F = 0.057$.	91N191
	i-octane/H_2O (96:4) (mic)	O_2	0.80^T	1			PL/Hp-52,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.80$; meas. $\phi_T(S)$ = 0.78; $\lambda_{exc} = 355$ nm. Soln. cont. 0.1 mol L^{-1} AOT.	91N191

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.169	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, dianion (Rose Bengal dianion, RB)**—Continued								
	H_2O/MeOH (1:1) pH = 7	O_2	0.75^T				CP/Pa-14	A = TrpH; λ_{exc} = 555 nm.	87F104
	MeOH	air or O_2	0.80					See Table 4.	
	MeOH	air	0.81^T				CP/Ac-14	A = DPBF.	90E215
	MeOH	air	0.77^T				CP/Ac-14	A = DPBF.	90F157
	MeOH	air[a]	0.82^T				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′ in ethanol; ϕ_Δ = 0.93 for 'pure' RB rel. to Eos; ϕ_Δ = 0.87 for 'commercial' RB rel. to Eos; ϕ_Δ = 0.81 for 'pure' RB rel. to ϕ_Δ = 0.76 for commercial RB.	90F251
	MeOH	1.06×10^{-2}	0.79^T	~1			CP/Oc-43,39	S′ = MB^+; A = TME; rel. to ϕ_Δ(S′) = 0.50; used ϕ_T(S) = 0.80[f]. Used $P_T^{O_2} = 1$.	84F191
	MeOH	O_2	0.80^T				CL/Oc-14	A = TME; λ_{exc} = 488 nm.	777221
	MeOH	O_2	0.80^T				CP/Oc-14	A = TME; λ_{exc} = 283-373 nm.	70F735
	MeOH	O_2	0.82^T				CP/Oc-14	A = 2,5-DMF; λ_{exc} = 283-373 nm.	70F735
	MeOH/ $C_6H_5CH_3$ (97:3)	air	0.91^T				CP/Ac-14	A = DPBF. $[O_2]$ varied.	87F479
	2-PrOH	air	0.76^T				CP/Ac-14	A = DPBF.	90E215
1.170	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, 6-*O*-acetyl-, ethyl ester**								
	CH_2Cl_2	O_2	0.61				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
1.171	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester**								
	CH_2Cl_2/ MeOH (8:2)	O_2	0.37				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 566 nm.	85F171
1.172	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, monoanion**								
	MeOH	air[a]	0.94				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.82				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
	MeOH	O_2	0.72				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 566 nm.	85F171
1.173	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, benzyltriphenylphosphonium salt**								
	MeOH	O_2	0.76				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.174	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, diphenyliodonium salt**								
	MeOH	O_2	0.74				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.175	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, diphenylmethylsulfonium salt**								
	MeOH	O_2	0.73				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.176	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, triethylammonium salt**								
	CH_2Cl_2	O_2	0.67				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.176	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, triethylammonium salt**—Continued								
	MeOH	O_2	0.74				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
1.177	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, benzyl ester, 2,4,6-triphenylpyrylium salt**								
	MeOH	O_2	0.70				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.178	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, bis(benzyltriphenylphosphonium) salt**								
	MeOH	O_2	0.74				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2 Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.179	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, bis(diphenyliodonium) salt**								
	MeOH	O_2	0.66				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	88F161
1.180	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, bis(triethylammonium) salt**								
	CH_2Cl_2	O_2	0.48				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
	MeOH	O_2	0.72				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
1.181	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, complexed with dicyclohexyl-18-crown-8**								
	CH_2Cl_2	air[a]	0.76				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 559 nm. Rel. to S′ in methanol.	86F462
	CH_3COCH_3	air[a]	0.70				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 557 nm. Rel. to S′ in methanol.	86F462
	$CHCl_3$	air[a]	0.76				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 559 nm. Rel. to S′ in methanol.	86F462
	$CHCl_3$	air[a]	0.36				CP/Ac-14	A = DPBF; λ_{exc} = 560 nm.	79F104
	MeOH	air[a]	0.63				CP/Ac-14	A = DPBF; λ_{exc} = 560 nm.	79F104
1.182	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, ethyl ester**								
	CH_2Cl_2	O_2	0.61				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
	MeOH	O_2	0.73				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
1.183	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, ethyl ester, triethylammonium salt**								
	CH_2Cl_2	O_2	0.71				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152
	MeOH	O_2	0.74				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 561 nm.	84F297 85F152

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.184	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, *p*-isopropylbenzyl ester, protonated**								
	diox	air[a]	0.80				CP/Ac-43	S′ = Eos; A = TPCP; rel. to $\phi_\Delta(S')$ = 0.32. Soln. contg. 10^{-3} mol L^{-1} HCl; rel. to S′ in ethanol.	90F251
1.185	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, *p*-isopropylbenzyl ester, monoanion**								
	MeOH	air[a]	0.90				CP/Ac-43	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.79				CP/Ac-43	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.76.	90F251
1.186	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, *O*-methyl-, methyl ester**								
	diox	air[a]	0.80				CP/Ac-43	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.70				CP/Ac-43	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.76.	90F251
	MeOH	air[a]	0.80				CP/Ac-43	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32. Rel. to S′ in ethanol.	90F251
1.187	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, methyl ester, protonated**								
	diox	air[a]	0.75				CP/Ac-43	S′ = *O*-Methyl Rose Bengal methyl ester; A = TPCP; rel. to $\phi_\Delta(S')$ = 0.70. Soln. contg. 10^{-3} mol L^{-1} HCl; rel. to S′ in methanol.	90F251
	diox	air[a]	0.86				CP/Ac-43	S′ = Eos; A = TPCP; rel. to $\phi_\Delta(S')$ = 0.32. Soln. contg. 10^{-3} mol L^{-1} HCl; rel. to S′ in ethanol.	90F251
1.188	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, methyl ester, monoanion**								
	MeOH	air[a]	0.80				CP/Ac-43	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.76.	90F251
	MeOH	air[a]	0.91				CP/Ac-43	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32. Rel. to S′ in ethanol.	90F251
1.189	**Fluorescein, 3,4,5,6-tetrachloro-2′,4′,5′,7′-tetraiodo-, octyl ester, tributylammonium salt**								
	$C_6H_5CH_3$	O_2	0.40				CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S')$ = 0.76; λ_{exc} = 561 nm.	84F297 85F152
1.190	**Fluorescein, 2′,4′,5′,7′-tetraiodo-, dianion (Erythrosin)**								
	CH_3CN	air	0.68^T				CP/Pa-14	A = DPF; P = 2,5-Diphenylfuran endoperoxide. Method adapted to allow for chain reaction.	87F440
	DMF	air[a]	0.54^T				CP/Ac-43	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.76.	88F618
	EtOH	air	0.69^T				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32.	83E113
	H_2O pH = 7	air	0.63^T				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S')$ = 0.57. A = RNO and ADPA.	83E113
	H_2O	air[a]	0.68^T	0.68			CP/Ac-43,42	S′ = MB^+; A = 2,5-DMF; rel. to $\phi_\Delta(S')$ = 0.52; used $\phi_T(S)$ = 1.0. Assumed $P_T^{O_2}$ = 1.	737339
	MeOD	~10^{-3}	0.60^T	0.57			PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S')$ = 0.53; meas. $\phi_T(S)$ = 1.1; λ_{exc} = 347 nm. $P_T^{O_2}$ = 1; rel. to S′ in EtOH. Recalcd. value = 0.70 using $\phi_\Delta(S')$ = 0.64 [88Z155].	88A165
1.191	**Fluorescein, tribromo-, dianion**								
	EtOH	air	0.32				CP/Ac-44	S′ = Eos; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.32.	83E113
	H_2O pH = 7	air	0.44				CP/Ac-44	S′ = Eos; rel. to $\phi_\Delta(S')$ = 0.57. A = RNO and ADPA.	83E113
1.192	**Furan, 2,5-di(2-thienyl)-**								
	EtOH	O_2	~0.1	~1			PL/Ac-14,42	A = DPBF; meas. $\phi_T(S)$ = 0.10^f; λ_{exc} = 353 nm. $P_T^{O_2}$ = 1, p_A = 0.75.	85N020

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.193	**Furo[2,3-*f*][1]benzopyran-7-one, 8-acetyl- (3-Acetoallopsoralen)**								
	C_6H_6	O_2	0.63* 0.55^T	 0.81			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.68$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
1.194	**Furo[2,3-*f*][1]benzopyran-7-one, 4,9-dimethyl- (4,7-Dimethylallopsoralen, 4,7-DMAPs)**								
	C_6H_6	1.91×10^{-3}	0.073* 0.064	 0.49			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.13$; $\lambda_{exc} = 355$ nm.	87E497
1.195	**Furo[2,3-*f*][1]benzopyran-7-one, 2,4,9-trimethyl- (4,7,5′-Trimethylallopsoralen)**								
	C_6H_6	1.91×10^{-3}	0.14* 0.12	 0.68			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.18$; $\lambda_{exc} = 355$ nm.	87E497
	H_2O pH = 7.3	2.65×10^{-4}					CP/Pa-43	S′ = 4,7-DMAPs; A = Im; P = Imidazole endoperoxide; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 365$ nm. RNO as monitor of P.	87E497
1.196	**Furo[2,3-*f*][1]benzopyran-7-one, 3,4,9-trimethyl- (4,7,4′-Trimethylallopsoralen)**								
	C_6H_6	1.91×10^{-3}	0.083* 0.073	 0.26			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.28$; $\lambda_{exc} = 355$ nm.	87E497
	H_2O pH = 7.3	2.65×10^{-4}					CP/Pa-43	S′ = 4,7-DMAPs; A = Im; P = Imidazole endoperoxide; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.38$; $\lambda_{exc} = 365$ nm. RNO as monitor of P.	87E497
1.197	**Furo[2,3-*h*][1]benzopyran-2-one, 3-acetyl- (3-Acetoangelicin)**								
	C_6H_6	O_2	0.46* 0.40^T	 0.73			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.54$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
1.198	**Furo[2,3-*h*][1]benzopyran-2-one, 4,6-dimethyl- (6,4-Dimethylangelicin)**								
	C_6H_6	O_2	0.01^T	0.25			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.04$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
1.199	**Furo[2,3-*h*][1]benzopyran-2-one, 4,8-dimethyl- (4,5′-Dimethylangelicin)**								
	C_6H_6	O_2	0.02^T	0.25			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.08$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
	H_2O pH = 7.3	air[a]	0.02^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^h$; $\lambda_{exc} = 365$ nm. Measured $\phi_T = 0.063$ in MeOH; RNO as monitor of P	84E794
1.200	**Furo[2,3-*h*][1]benzopyran-2-one, 4,9-dimethyl- (4,4′-Dimethylangelicin)**								
	C_6H_6	O_2	0.02^T	0.18			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.11$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
	H_2O pH = 7.3	O_2	0.03^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; $\lambda_{exc} = 365$ nm. Measured $\phi_T = 0.11$ in EtOH; RNO as monitor of P; $P_T^{O_2} = 1$.	84F111 84E794
1.201	**Furo[2,3-*h*][1]benzopyran-2-one, 5,9-dimethyl- (4′,5-Dimethylangelicin)**								
	H_2O pH = 7.3	O_2	0.007^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; $\lambda_{exc} = 365$ nm. Measured $\phi_T = 0.12$ in EtOH; RNO as monitor of P; $P_T^{O_2} = 1$.	84F111 84E794
1.202	**Furo[2,3-*h*][1]benzopyran-2-one, 6,9-dimethyl- (6,4′-Dimethylangelicin)**								
	C_6H_6	O_2	0.01^T	0.14			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.07$; $\lambda_{exc} = 355$ nm.	88E121
1.203	**Furo[2,3-*h*][1]benzopyran-2-one, 4-methyl- (4-Methylangelicin)**								
	H_2O pH = 7.3	air[a]	0.02^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; $\lambda_{exc} = 365$ nm. Measured $\phi_T = 0.05$ in MeOH; RNO as monitor of P	84E794

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.204	**Furo[2,3-*h*][1]benzopyran-2-one, 5-methyl- (5-Methylangelicin)**								
	H_2O pH = 7.3	air[a]	0.02^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; λ_{exc} = 365 nm. Measured $\phi_T = 0.12$ in MeOH; RNO as monitor of P	84E794
1.205	**Furo[2,3-*h*][1]benzopyran-2-one, 8-methyl- (5′-Methylangelicin)**								
	H_2O pH = 7.3	air[a]	0.007^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; λ_{exc} = 365 nm. Measured $\phi_T = 0.08$ in EtOH; RNO as monitor of P	84E794
1.206	**Furo[2,3-*h*][1]benzopyran-2-one, 9-methyl- (4′-Methylangelicin)**								
	H_2O pH = 7.3	O_2	0.01^T				CP/Pa-43	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; λ_{exc} = 365 nm. Measured $\phi_T = 0.08$ in EtOH; RNO as monitor of P; $P_T^{O_2} = 1$.	84F111 84E794
1.207	**Furo[2,3-*h*][1]benzopyran-2-one, 4,6,9-trimethyl- (6,4,4′-Trimethylangelicin)**								
	C_6H_6	O_2	0.02^T	0.16			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.13; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
1.208	**Furo[3,2-*f*][1]benzopyran-7-one (Isopseudopsoralen)**								
	C_6H_6	O_2	0.11*				PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.15; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
			0.10^T	0.67					
1.209	**Furo[3,2-*f*][1]benzopyran-7-one, 8-acetyl- (3-Acetoisopseudopsoralen)**								
	C_6H_6	O_2	0.73*				PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.65; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
			0.64^T	0.99					
1.210	**Furo[3,2-*g*][1]benzopyran-7-one, 2-acetyl-5,9-dimethyl- (5′-Aceto-4,8-dimethylpsoralen)**								
	C_6H_6	O_2	0.43*				PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.52; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
			0.38^T	0.72					
1.211	**Furo[3,2-*g*][1]benzopyran-7-one, 2-acetyl-9-methyl- (5′-Aceto-8-methylpsoralen)**								
	C_6H_6	O_2	0.13*				PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.28; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
			0.11^T	0.39					
1.212	**Furo[3,2-*h*][1]benzopyran-8-one, 7-acetyl- (3-Acetopseudoisopsoralen)**								
	C_6H_6	O_2	0.63*				PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S)$ = 0.56; λ_{exc} = 355 nm. $P_T^{O_2} = 1$.	88E121
			0.55^T	0.99					
1.213	**Helianthrene**								
	n-C_5H_{12}	air	0.52				CP/Ac-A.18	A = S; λ_{exc} = 546 nm.	87F480
	$C_6H_5CH_3$	air	0.56				CP/Ac-14,38	A = S; meas. $\phi_T(S) = 0.46$; λ_{exc} = 546 nm. $f_T^{O_2}$ = 1, $[O_2]$ varied, $(f_\Delta^S + f_\Delta^T f_T^{O_2}) = 1.0$.	87F479
	CCl_4	air	0.50				CP/Ac-14	A = S; λ_{exc} = 546 nm. $[O_2]$ varied, $f_T^{O_2} = 1$.	87F479
	CH_3COCH_3	air	0.50				CP/Ac-A.18	A = S; λ_{exc} = 546 nm.	87F480
	MeOH /$C_6H_5CH_3$ (97:3)	air	0.42				CP/Ac-A.18	A = S; λ_{exc} = 546 nm.	87F480
	$C_6H_5CH_2OH$	air	0.24				CP/Ac-A.18	A = S; λ_{exc} = 546 nm.	87F480
	m-Cresol	air	0.18				CP/Ac-A.18	A = S; λ_{exc} = 546 nm.	87F480
1.214	**(*E,E,E*)-2,4,6-Heptatrienal, 5-methyl-7-(2,6,6-trimethyl-1-cyclohexen-1-yl)- (*all-trans*-C_{17} aldehyde)**								
	c-C_6H_{12}	air	0.66^T	1.0			PL/Ad-49,39	A = DPBF; AC = S; λ_{exc} = 337 nm; used $k_d = 5 \times 10^4\ s^{-1}$, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.66^c$, $\varepsilon_T(AC)$ = 63000 L mol^{-1} cm^{-1} at 410 nm.	85F041

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.214	**(*E,E,E*)-2,4,6-Heptatrienal, 5-methyl-7-(2,6,6-trimethyl-1-cyclohexen-1-yl)- (*all-trans*-C_{17} aldehyde)—Continued**								
	c-C_6H_{12}	O_2	0.72^T	1			PL/Ad 49,42	A = DPBF; AC = BP; λ_{exc} = 337 nm; used k_d = 5.0×10^4 s^{-1}, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.66^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	84F005
	MeOH	air	$\sim 0.4^T$	1			PL/Ad-49,39	A = DPBF; AC = S; λ_{exc} = 337 nm; used k_d = 1×10^5 s^{-1}, $k_A = 8 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(S)$ = 0.41^c, $\varepsilon_T(AC) = 57000$ L mol^{-1} cm^{-1} at 440 nm.	85F041
	MeOH	O_2	0.42^T	1.0			PL/Ad-49,42	A = DPBF; AC = BP; λ_{exc} = 337 nm; used k_d = 1.0×10^5 s^{-1}, $k_A = 8.1 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.41^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	84F005
1.215	**Heterocoerdianthrone (HCD)**								
	$C_6H_3Cl_3$	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
	$C_6H_5CH_3$	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
	C_6H_6	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
	C_6H_6	$(2\text{-}9) \times 10^{-3}$				1.9	CP/Ac-14,38	A = DPBF; λ_{exc} = 578 nm. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta^T = 0.024$.	84F197
	CCl_4	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
	$CHCl_3$	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
	CS_2	$(1\text{-}50) \times 10^{-4}$		~1	~1		CP/Ac-14,38	A = S. Assumed $f_T^{O_2} = 1$.	767570
1.216	**1,3,5-Hexatriene, 1,6-diphenyl- (DPH)**								
	c-C_6H_{12}	air					PL/Ad-49,39	A = DPBF; AC = S; λ_{exc} = 337 nm; used k_d = 5×10^4 s^{-1}, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(AC) = 114000$ L mol^{-1} cm^{-1} at 416 nm. $\phi_T \approx 0$; $f_\Delta^S + f_T^{O_2} f_\Delta^T = 1.7$.	85F041
	n-C_6H_{14}	O_2	1.0	≥0.24	≥0.17		CP/Ac-27	A = 2,5-DMF; λ_{exc} = 313 nm. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	MeOH	air					PL/Ad-49,39	A = DPBF; AC = S; λ_{exc} = 337 nm; used k_d = 1×10^5 s^{-1}, $k_A = 8 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(AC)$ = 121000 L mol^{-1} cm^{-1} at 410 nm. $\phi_T \approx 0$; $f_\Delta^S + f_T^{O_2} f_\Delta^T = 1.6$.	85F041
1.217	**Indole, 1-methyl-**								
	C_6H_6	air[a]		0.35			PL/βCb-57	S′ = BP; TD = AP; rel. to $\phi_\Delta(S') = 0.35$. Measured $f_\Delta^T(S)/\phi_\Delta(S') = 1.0$.	76F904
	C_6H_6	air[a]		>0.2			PL/βCb-57	S′ = BP; TD = Xanthone; rel. to $\phi_\Delta(S') = 0.35$. Measured $f_\Delta^T(S)/\phi_\Delta(S') = 0.7$ but energy transfer efficiency < 100%.	76F904
1.218	**β-Ionone**								
	C_6H_6	O_2	0.22* 0.25^T	~0.5			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S') = 0.4$; meas. $\phi_T(S) = 0.5$; λ_{exc} = 337 nm.	85E293
1.219	**Isobenzofuran, 1,3-diphenyl- (DPBF)**								
	c-C_6H_{12}	air[a]	0.22				CP/Ac-14	A = S; λ_{exc} = 365 nm. In presence of 5 g L^{-1} ethylene-propylene-ethylidenenorbornene terpolymer.	84P629
	C_6H_6	air	0.26				CP/Ac-14	A = S; λ_{exc} = 365 nm.	81F017
	C_6H_6	1.9×10^{-3}	0.28				CP/Ac-46	A = S; λ_{exc} = 365 nm. Assumed $f_T^{O_2} = 1$; measured $\phi_\Delta(S)/\phi_\Delta(S') = 0.30$ and 0.56 for S′ = Cor and BP, resp.	81F364
	C_6H_6	9.0×10^{-3}	0.78			1.5	CP/Ac-46	A = S; λ_{exc} = 365 nm. Assumed $f_T^{O_2} = 1$; measured $\phi_\Delta(S)/\phi_\Delta(S') = 0.80$ and 0.88 for S′ = Cor and BP, resp.	81F364

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.220	**Naphthalene (Np)**								
	Hexanes	O_2	0.73				CP/Ac-14	A = 2,5-DMF; λ_{exc} = 313 nm. Independent of concentration.	78F016
	c-C_6H_{12}	air		1.0			PL/Ad,St-49	A = DPBF; AC = S; TD = p-MAP; λ_{exc} = 355 nm; used $k_d = 4.2 \times 10^4$ s^{-1}, ε_T(S) = 24,500 L mol^{-1} cm^{-1} at 415 nm.	87E234
	n-C_6H_{14}	air	0.5				PL/Ad-43	S′ = An; A = DPBF; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 264 nm. $P_T^{O_2} = 1$.	82E258
	C_6D_6	air		0.59* 0.49			PR/LI-60	S′ = BP; rel. to f_Δ^T(S′) = 0.29.	89E113
	C_6H_6	air or O_2		0.62				See Table 4.	
	C_6H_6	air		0.68* 0.56			PR/βCb-59	S′ = BP; TA = Car; rel. to f_Δ^T(S′) = 0.29; used ε_T(S) = 13,200 L mol^{-1} cm^{-1} at 425 nm, ε_T(S′) = 7630 L mol^{-1} cm^{-1} at 532.5 nm. $P_T^{O_2}$ >0.94.	89E158
	C_6H_6	air		0.55			PL/Ad,St-49	A = DPBF; TD = p-MAP; λ_{exc} = 355 nm; used $k_d = 3.1 \times 10^4$ s^{-1}, ε_T(S) = 13,200 L mol^{-1} cm^{-1} at 425 nm.	87E234
	C_6H_6	air[a]		0.65			PL/βCb-57	S′ = BP; TD = AP; rel. to f_Δ^T(S′) = 0.35. Measured f_Δ^T(S)/f_Δ^T(S′) = 1.9.	76F904
	C_6H_6	air[a]		0.60			PL/βCb-57	S′ = BP; TD = Xanthone; rel. to f_Δ^T(S′) = 0.35. Measured f_Δ^T(S)/f_Δ^T(S′) = 1.7.	76F904
	C_6H_6	O_2		0.5			PR/Ad,St-49	A = DPBF; used ϕ_T(S) = 0.82, ε_T(S) = 13,200 L mol^{-1} cm^{-1} at 425 nm. Measured $G(^3S^*)$.	78E263
	D_2O (mic)	O_2		1.0			PL/Ad-49	A = DPBF; TD = BP; λ_{exc} = 355 nm; used $k_d = 2.4 \times 10^4$ s^{-1}. Soln. cont. 0.2-0.5 mol L^{-1} SDS; ε_T(S) detd. in SDS at 415 nm by comparison with ε = 24500 L mol^{-1} cm^{-1} at 415 nm in cyclohexane.	87E234
	MeOH	O_2	0.41				CP/Ac-14	A = 2,5-DMF; λ_{exc} = 313 nm. Assumed $f_T^{O_2}$ = 1; $P_S^{O_2} = P_T^{O_2} = 1$; [S] → 0.	78F016
	MeOH	O_2	0.14				CP/Oc-14	A = TME; λ_{exc} = 283-373 nm.	70F735
	MeOH	O_2	0.14				CP/Oc-14	A = 2,5-DMF; λ_{exc} = 283-373 nm.	70F735
1.221	**Naphthalene excimer**								
	MeOH	O_2	0.89				CP/Ac-14	A = 2,5-DMF; λ_{exc} = 313 nm. Assumed f_Δ^T = 1; [S]→∞.	78F016
1.222	**Naphthalene, 1-bromo-**								
	MeOH	O_2	0.86				CP/Ac-14	A = 2,5-DMF; λ_{exc} = 313 nm.	78F016
1.223	**Naphthalene, 1-methyl- (1MN)**								
	c-C_6H_{12}	→ ∞	0.77^{ST}				PL/LI-56	S′ = Py; rel. to ϕ_Δ(S′) = 0.81; λ_{exc} = 355 nm.	91E297
	CH_3CN	→ ∞	0.30^{ST}				PL/LI-56	S′ = DCA; rel. to ϕ_Δ(S′) = 2.0; λ_{exc} = 355 nm.	91E297
1.224	**2-Naphthalenethione, 1,1-dimethyl-**								
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.6* 0.7^T	 0.7			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to ϕ_Δ(S′) = 0.4; meas. ϕ_T(S) = 1; λ_{exc} = 337 nm. Used $P_S^{O_2} = 0$.	86A240
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	1.0^T	1.0			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to ϕ_Δ(S′) = 1; meas. ϕ_T(S) = 1; λ_{exc} = 532 nm. Used $P_S^{O_2} = 0$.	86A240
1.225	**2-Naphthalenethione, 1,1,3-trimethyl-**								
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	1.0^T	1.0			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to ϕ_Δ(S′) = 1; meas. ϕ_T(S) = 1; λ_{exc} = 532 nm. Used $P_S^{O_2} = 0$.	86A240
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.7* 0.8^T	 0.8			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to ϕ_Δ(S′) = 0.4; meas. ϕ_T(S) = 1; λ_{exc} = 337 nm. Used $P_S^{O_2} = 0$.	86A240

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.226	**Norharman (β-Carboline)**								
	D_2O pD = 7	air	0.03				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 337$ nm.	87F290
1.227	**1,3,5,7-Octatetraene, 1,8-diphenyl- (DPO)**								
	c-C_6H_{12}	air				1.9	PL/Ad-49,39	A = DPBF; AC = S; $\lambda_{exc} = 337$ nm; used $k_d = 5 \times 10^4\ s^{-1}$, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(AC) = 210000$ L mol^{-1} cm^{-1} at 437 nm. $\phi_T \approx 0$; $f_\Delta^S + f_T^{O_2} f_\Delta^T = 1.9$.	85F041
	MeOH	air				1.4	PL/Ad-49,39	A = DPBF; AC = S; $\lambda_{exc} = 337$ nm; used $k_d = 1 \times 10^5\ s^{-1}$, $k_A = 3.4 \times 10^8$ L mol^{-1} s^{-1}, $\varepsilon_T(AC) = 191000$ L mol^{-1} cm^{-1} at 430 nm. $\phi_T \approx 0$; $f_\Delta^S + f_T^{O_2} f_\Delta^T = 1.4$.	85F041
1.228	**2,4,6-Octatriene, 2,6-dimethyl- (Neoalloocimene)**								
	C_6H_6	1×10^{-2}		0.54* 0.45			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S') = 0.29$; $\lambda_{exc} = 355$ nm. Measured $P_T^{O_2}$.	89A235
1.229	**3-Pentanethione, 2,2,4,4-tetramethyl- (DTBTK)**								
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.81^T	0.85			PL/Ad-49,39	A = DPBF; AC = DPH; TA = DPH; meas. $\phi_T(S) = 0.95^e$; $\lambda_{exc} = 490$ nm; used $k_d = 4.0 \times 10^4\ s^{-1}$, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 100{,}000$ L mol^{-1} cm^{-1} at 426 nm.	85A300
1.230	**2-Pentanone**								
	neat	O_2	0.03				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. Used $p_A = 1$.	79F184
1.231	**3-Pentanone**								
	neat	O_2	0.04				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. Used $p_A = 1$.	79F184
1.232	**3-Pentanone, 2,4-dimethyl-**								
	neat	O_2	<0.0003				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. Used $p_A = 1$.	79F184
1.233	**Perylene (Per)**								
	n-C_6H_{14}	O_2	1.3	≥0.65	≥0.65		CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 366$ nm. $P_T^{O_2} = 1$; assumes $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	C_6H_6	air		0.88* 0.78			PL/LI-60	S′ = BP; TD = BP; rel. to $f_\Delta^T(S') = 0.31$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$, cor. for energy transfer efficiency.	90A328
	C_6H_6	air	0.29				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 532$ nm. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$.	90A328
	C_6H_6	var.			0.56	1.3	PL/LI-38,56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = \sim 0$. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$, used $f_\Delta^T = 0.78$.	90A328
	C_6H_6	O_2 var.		~1			CP/Ac-14,38	$\lambda_{exc} = 435.8$ nm. A = DMA and DMBA; results consistent with $f_\Delta^S << f_\Delta^T$; assumed $f_T^{O_2} = 1$; meas. $\phi_T f_\Delta^T/(f_\Delta^T + f_\Delta^S) = 0.06$.	69F388
1.234	**Perylo[1,12-*def*]-1,3-dioxepin-5,11-dione, 6,12-dihydroxy-8,9-bis(2-hydroxypropyl)-7,10-dimethoxy- (Cercosporin)**								
	C_6D_6	air or O_2	0.81				PL/LI-56	S′ = MPDME; rel. to $\phi_\Delta(S') = 0.81$; $\lambda_{exc} = 532$ nm.	83R123
	C_6D_6	air[a]	0.81				CP/Ac-43	S′ = MPDME; A = 2M2P; rel. to $\phi_\Delta(S') = 0.81$.	83R123
1.235	**Phenalen-1-one**								
	C_6D_6	air[a]	0.94^T	0.95			CP/LI-56,42	S′ = 9-Fluorenone; rel. to $\phi_\Delta(S') = 0.83$; meas. $\phi_T(S) = 1.0^d$; $\lambda_{exc} = 367$ nm; used $\phi_T(S) = 1^d$. Assumed $P_T^{O_2} = 1$.	91F023
	C_6H_6	air[a]	0.93^T	0.93			CP/LI-56,42	S′ = 9-Fluorenone; rel. to $\phi_\Delta(S') = 0.83$; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 367$ nm. Assumed $P_T^{O_2} = 1$.	91F023

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.235	**Phenalen-1-one**—Continued								
	CCl_4	air[a]	0.95^T				CP/Ac-14	A = TME. D.E. Nicodem, R.S. da Silva, M.M. da Silva, personal communication.	91F023
	CD_3OD	air[a]	0.97^T	0.97			CP/LI-56,42	S′ = RB; rel. to $\phi_\Delta(S') = 0.76$; meas. $\phi_T(S) = 1.0$. $P_T^{O_2} = 1$; meas. ratio of I_a at $\lambda_{exc}(S) = 367$ and $\lambda_{exc}(S') = 547$ nm.	91F023
1.236	**Phenalen-1-one, 6-amino-**								
	EtOH	air[a]	0.043				CP/Ac-14	A = DMA. Extrapolated to [DMA] $\rightarrow \infty$.	85F501
1.237	**Phenanthrene**								
	c-C_6H_{12}	$\rightarrow \infty$	0.44^{ST}				PL/LI-56	S′ = Py; rel. to $\phi_\Delta(S') = 0.81$; $\lambda_{exc} = 355$ nm.	91E297
	n-C_6H_{14}	air	0.3^T				PL/Ad-43	S′ = An; A = DPBF; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 264$ nm. $P_T^{O_2} = 1$.	82E258
	C_6H_6	O_2	0.59	0.84			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.70$. Measured $\phi_\Delta = 0.57$, $P_T^{O_2} = 0.97$ and ϕ_F.	88E449
	C_6H_6	O_2	0.62	0.88			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 0.70$. Measured $P_T^{O_2} = 0.97$.	88E449
	CH_3CN	$\rightarrow \infty$	0.24^{ST}				PL/LI-56	S′ = DCA; rel. to $\phi_\Delta(S') = 2.0$; $\lambda_{exc} = 355$ nm.	91E297
	MeOH	O_2	0.50				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm.	78F016
1.238	**Phenanthro[1,10,9,8-*opqra*]perylene-7,14-dione, 1,3,4,6,8,13-hexahydroxy-10,11-dimethyl- (Hypericin, HYP)**								
	D_2O (mic) pH = ~7	air	0.72	1			PL/Ad-49,42	A = DPBF; AC = S; meas. $\phi_T(S) = 0.70$; $\lambda_{exc} = 640$ nm; used $k_d = 2.0 \times 10^4$ s^{-1}, $k_A = 1.0 \times 10^9$ L mol^{-1} s^{-1}, $\varepsilon_T(AC) = 19400$ L mol^{-1} cm^{-1} at 640 nm. BRIJ 35 micelles.	88N343
	EtOH	2.1×10^{-3}	0.73	1	0		PL/Ad-49,39	A = MDH; P = Mesodiphenylhelianthrene endoperoxide; AC = S; $\lambda_{exc} = 308$ nm; used $k_d = 8.3 \times 10^4$ s^{-1}, $k_A = 7.0 \times 10^9$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.71$, $\varepsilon_T(AC) = 13100$ L mol^{-1} cm^{-1} at 630 nm.	87F541
1.239	**Phenazine (Pz)**								
	C_6H_6	air or O_2	0.88	1.0				See Table 4.	
	C_6H_6	air	0.83^T	0.98			PL/LI-57,42	used $\phi_T(S) = 0.85$. S′ = Pz in O_2, $\phi_\Delta(S') = 0.83$; $P_T^{O_2} = 1$.	90A328
	C_6H_6	O_2	0.83^T	0.98			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 0.85$. Measured $\phi_\Delta = 0.83$, $P_T^{O_2} = 1$ and ϕ_F.	88E449
	CH_2Cl_2	O_2	0.89^T				PL/Hp-52	$\lambda_{exc} = 354$ nm.	88Z155
	$CHCl_3$	O_2	0.84^T				PL/Hp-52	$\lambda_{exc} = 354$ nm.	88Z155
	i-octane/ H_2O (96:4) (mic)	O_2	0.80				PL/Hp 53	$\lambda_{exc} = 355$ nm. Soln. cont. 0.1 mol L^{-1} AOT; meas. $\phi_F = <0.01$.	91N191
1.240	**Phenothiazine**								
	CH_3CN	O_2	0.20	0.21			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; meas. $\phi_T(S) = 0.96^f$; $\lambda_{exc} = 355$ nm.	91A308
1.241	**Phenothiazine, 2-acetyl-**								
	CH_3CN	O_2	~0.46				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.242	**Phenothiazine, 2-methoxy-**								
	CH_3CN	O_2	0.21				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.243	**Phenothiazine, 10-methyl-**								
	CH_3CN	O_2	0.19				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.244	**Phenothiazine, 2-(trifluoromethyl)-**								
	CH_3CN	O_2	0.18				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 355$ nm.	91A308
1.245	**Phenothiazinium, 3,7-bis(dimethylamino)- (Methylene Blue, MB)**								
	$C_6H_5CH_2OH$	air	0.48^T				CP/Ac-14	A = DPBF. $[O_2]$ varied.	87F479
	$C_6H_5CH_3$/ MeOH (99:1)	air	0.51^T				CP/Ac-14	A = DPBF. $[O_2]$ varied.	87F479
	CH_2Cl_2	air[a]	0.57^T	~1			CP/Ac-14,42	A = 2,5-DMF; used $\phi_T(S) = 0.52$. Assumed $P_T^{O_2} = 1$.	737339
	CH_3CN	air	0.52^T				CP/Pa-14	A = DPF; P = 2,5-Diphenylfuran endoperoxide. Method adapted to allow for chain reaction.	87F440
	EtOH	air[a]	0.52^T	1			CP/Ac-14,42	A = DMA; used $\phi_T(S) = 0.52$. Assumed $P_T^{O_2} = 1$.	737339
	EtOH	9.9×10^{-3}	0.50^T	~1			CP/Oc-43,39	A = TME; rel. to $\phi_\Delta(S') = 0.50$; used $\phi_T(S) = 0.52$[f]. Used $P_T^{O_2} = 1$; rel. to MB^+ in MeOH.	84F191
	H_2O	air	0.60^T				CP/Ac-27	A = 2,5-DMF. Assumed $f_T^A = 2$; $P_T^{O_2} = 1$.	78F061
	H_2O	air[a]	0.52^T	1			CP/Ac-14,42	A = 2,5-DMF; used $\phi_T(S) = 0.52$. Assumed $P_T^{O_2} = 1$.	737339
	H_2O pH = 7.4	O_2	0.39^T				CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 546$ nm. RNO as monitor of P.	85R008
	H_2O (mic) pH = 7.4	O_2	0.37^T				CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 546$ nm. RNO as monitor of P; 0.23 mg/mL egg phosphatidylcholine.	85R008
	MeOD	$\sim 10^{-3}$	0.70* 0.58^T				PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.57$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; rel. to S′ in EtOH; recalcd. using $\phi_\Delta(S') = 0.64$ [88Z155].	88A165
	MeOH	air	0.50^T				CP/Ac-14	A = DPBF.	90F157
	MeOH	air[a]	0.57^T				PL/LI-56	S′ = Ery; rel. to $\phi_\Delta(S') = 0.60$.	87R138
	MeOH	air[a]	0.52^T				CP/Ac-14,42	A = DPBF; used $\phi_T(S) = 0.52$. Assumed $P_T^{O_2} = 1$.	737339
	MeOH	O_2	0.52^T				CL/Ac-14	A = DPBF; $\lambda_{exc} = 633$ nm. Assumed $f_\Delta^T = 1$.	87E690
	MeOH/ $C_6H_5CH_3$ (97:3)	air	0.48^T				CP/Ac-14	A = DPBF. $[O_2]$ varied.	87F479
	2-Methoxy-ethanol	O_2	0.43^T				CL/Ac-14	A = DPBF; $\lambda_{exc} = 633$ nm. Assumed $f_\Delta^T = 1$.	87E690
	Propylene carbonate	O_2	0.35^T				CL/Ac-14	A = DPBF; $\lambda_{exc} = 633$ nm. Assumed $f_\Delta^T = 1$.	87E690
1.246	**Phenothiazinium, 3,7-diamino- (Thionine)**								
	CH_3CN	air	0.58^T				CP/Pa-14	A = DPF; P = 2,5-Diphenylfuran endoperoxide. Method adapted to allow for chain reaction.	87F440
	H_2O	air[a]	0.58^T	1			CP/Ac-43,42	S′ = MB^+; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.52$; used $\phi_T(S) = 0.55$. Assumed $P_T^{O_2} = 1$.	737339
1.247	**Pivalothiophenone**								
	C_6H_6	air	1.0^T	1.0			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S') = 1$; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 532$ nm.	87A340
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1$. $[S] \rightarrow 0$, $\phi_\Delta = 0.94$ at $[S] = 0.01$ mol L^{-1}.	83F028 82F140

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.248	**Pivalothiophenone, 4′-chloro-**								
	C_6H_6	air[a]	1.1^T	1			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S') = 1$; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 532$ nm.	87A340
1.249	**Pivalothiophenone, 4′-fluoro-**								
	C_6H_6	air	0.98^T	0.98			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S') = 1$; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 532$ nm.	87A340
1.250	**Pivalothiophenone, 4′-methoxy-**								
	C_6H_6	air	0.87^T	0.87			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S') = 1$; meas. $\phi_T(S) = 1.0$; $\lambda_{exc} = 532$ nm.	87A340
	$CHCl_3$	air[a]	1.0^T	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1$. $[S] \to 0$, $\phi_\Delta = 0.86$ at $[S] = 0.01$ mol L^{-1}.	83F028 82F140
1.251	**1,2-Propanedione, 1-phenyl-**								
	C_6H_6	O_2	0.38				CP/Pa-14	A = 1,2-Dimethylcyclohexene; $\lambda_{exc} = 366$ nm. P = 3-Hydroxy-1,2-dimethylcyclohexene, 2-Hydroxy-2-methyl-1-methylidenecyclohexane, and 3-Hydroxy-2,3-dimethylcyclohexene.	85F153
1.252	**Pseudoisopsoralen (Furo[3,2-*h*][1]benzopyran-8-one)**								
	C_6H_6	O_2	0.01^T	0.33			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.03$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121
1.253	**Pseudopsoralen (Furo[2,3-*g*][1]benzopyran-6-one)**								
	C_6H_6	O_2	0.03^T	0.60			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.05$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
1.254	**Pseudopsoralen, 3-carbethoxy-**								
	C_6H_6	O_2	0.56* 0.49^T	0.96			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.51$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
1.255	**Psoralen (Furo[3,2-*g*][1]benzopyran-7-one)**								
	C_6H_6	O_2	0.01^T	0.33			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.03$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
	CCl_4	air	0.0055				MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 652$ nm.	83E813
	D_2O pD = 7.0	O_2	0.18				CP/Ac-44	S′ = HP; A = Subtilisin Carlsberg; rel. to $\phi_\Delta(S') = 0.43$; $\lambda_{exc} = 365$ nm.	87R015
	D_2O	air	0.04				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.3$; $\lambda_{exc} = 337$ nm.	86E959 86F144
	MeOH	air	0.05				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.4$; $\lambda_{exc} = 337$ nm.	86E959 86F144
1.256	**Psoralen, 3-carbethoxy-**								
	C_6H_6	O_2	0.34* 0.30^T	1.0			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.30$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
	H_2O pH = 7.3	O_2	0.3^T	1			CP/Pa-43,42	S′ = Ang; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.02^b$; $\lambda_{exc} = 365$ nm; used $\phi_T(S) = 0.32^d$. RNO as monitor of P; $P_T^{O_2} = 1$.	84F111
1.257	**Psoralen, 5,8-dimethoxy-**								
	C_6H_6	O_2	0.005* 0.004^T	0.10			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.04$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
1.258	**Psoralen, 5-methoxy-**								
	C_6H_6	air	0				PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; $\lambda_{exc} = 308$ nm. No emission detected.	91F273

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.258	**Psoralen, 5-methoxy-—Continued**								
	C_6H_6	O_2	0.02^T	0.29			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.07$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
	D_2O pD ≅ 7.0	O_2	0.013				CP/Ac-44	S′ = HP; A = Subtilisin Carlsberg; rel. to $\phi_\Delta(S') = 0.43$; $\lambda_{exc} = 365$ nm.	87R015
1.259	**Psoralen, 5-methoxy-, DNA complex**								
	D_2O/EtOH (97.5:2.5)	O_2					CP/Ac-43	S′ = 5-MOP; A = DOPA; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 3.2$; $\lambda_{exc} = 313$ nm. Soln. contg. 0.1% DNA, 2×10^{-3} mol L^{-1} NaCl.	81F482
	D_2O/EtOH (97.5:2.5)	O_2					CP/Ac-43	S′ = 5-MOP; A = DOPA; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 3.6$; $\lambda_{exc} = 335$ nm. Soln. contg. 0.1% DNA, 2×10^{-3} mol L^{-1} NaCl.	81F482
1.260	**Psoralen, 8-methoxy- (8-MOP)**								
	C_6H_6	air	<0.02				PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; $\lambda_{exc} = 308$ nm. No emission detected.	91F273
	C_6H_6	O_2	0.005* 0.004^T	0.4			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.01$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
	CCl_4	air	0.002^T				MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 652$ nm.	83E813
	CCl_4	air[a]	<0.03				MP/LI-56	S′ = An. Used $\phi_T(An) = 0.7$.	82F071
	D_2O pD = 7.0	O_2	0.035				CP/Ac-44	S′ = HP; A = Subtilisin Carlsberg; rel. to $\phi_\Delta(S') = 0.43$; $\lambda_{exc} = 365$ nm.	87R015
	D_2O	air	0.009				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.3$; $\lambda_{exc} = 337$ nm.	86E959 86F144
	H_2O	air	0.0007				CP/Ac-14	A = S; $\lambda_{exc} = 313$ nm.	83F188
	H_2O/EtOH (1:1)	air[a]	0.03^T				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.5$; $\lambda_{exc} = 337$ nm.	86F144
	MeOH	air	0.02^T	~0.7			PL/LI-56,42	S′ = RF; rel. to $\phi_\Delta(S') = 0.4$; $\lambda_{exc} = 337$ nm; used $\phi_T(S) = 0.03$[d].	86E959 86F144
1.261	**Psoralen, 4,5′,8-trimethyl-**								
	C_6H_6	O_2	0.09* 0.08^T	0.38			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.21$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$.	88E121 86E160
1.262	**Pyranthrene**								
	$C_6H_5CH_3$	1.2×10^{-3}				0.97	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.55$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 14{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.97$.	83F075
	C_6H_5CN	1.2×10^{-3}				0.45	PL/Ad,St-48	A = Rub; meas. $\phi_T(S) = 0.52$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; used $\varepsilon_T(S) = 8{,}000$ L mol^{-1} cm^{-1} at λ_{max}; $n_\Delta = 0.45$.	83F075
1.263	**Pyrene (Py)**								
	Hexanes	O_2	0.86				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm.	78F016
	n-C_6H_{14}	O_2	0.79				CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$; used $p_A = 1$.	79E643
	$C_6H_5CH_3$	1.2×10^{-3}	1.9				PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	82E010
	C_6D_6	1.2% O_2 in N_2		0.65			PR/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S') = 0.55$. $P_T^{O_2} = 1$; cor. for energy transfer efficiency.	90A328
	C_6H_6	air	0.71				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 532$ nm. $P_T^{O_2} = 1$	90A328

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.263	**Pyrene (Py)**—Continued								
	C_6H_6	O_2	0.74^{ST}				PL/Hp-52	$\lambda_{exc} = 355$ nm. Measured $\phi_\Delta = 0.74$, $P_T^{O_2} = 1$ and $\phi_T^{O_2} = 0.96$ and ϕ_F. Authors assume $f_\Delta{}^S = 0$ and use $\phi_T^{O_2}(S) = 0.96$ to give $f_\Delta{}^T = 0.77$ but $P_S^{O_2} = 0.95$ so values of $f_\Delta{}^S$ and $f_\Delta{}^T$ are indeterminable.	88E449
	C_6H_6	O_2	0.74^{ST}				PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$. Measured $P_T^{O_2} = 1$ and $\phi_T^{O_2} = 0.96$. Authors assume $f_\Delta{}^S = 0$ and use $\phi_T^{O_2}(S) = 0.96$ to give $f_\Delta{}^T = 0.77$ but $P_S^{O_2} = 0.95$ so values of $f_\Delta{}^S$ and $f_\Delta{}^T$ are indeterminable.	88E449
	C_6H_6	var.			0.13	0.78	PL/LI-38,56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; meas. $\phi_T(S) = 0.29$. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$, used $f_\Delta{}^T = 0.65$.	90A328
	C_6H_6	1.9×10^{-3}, 9.0×10^{-3}	1.5^{ST}	~1	~0.5	1.5	CL/Ac-49,38	S′ = A = DMA; rel. to $\phi_\Delta(S') = 1.0$. Assumed $f_T^{O_2} = 1$.	83F116
	CH_3CN	$\rightarrow\infty$	0.42^{ST}				PL/LI-56	S′ = DCA; rel. to $\phi_\Delta(S') = 2.0$; $\lambda_{exc} = 355$ nm.	91E297
	H_2O (mic)	O_2	0.9				CP/Ac-14	A = DPBF; $\lambda_{exc} = 338$ nm. [SDS] = 0.1 mol L^{-1}.	78A174
	H_2O (mic)	O_2	1.0				CP/Ac-14	A = DPBF; $\lambda_{exc} = 338$ nm. [DTAC] = 0.1 mol L^{-1}.	78A174
	MeOH	O_2	0.6				CP/Ac-14	A = DPBF; $\lambda_{exc} = 338$ nm.	78A174
	MeOH	O_2	0.76				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. Assumed $f_\Delta{}^T = 1$; $[S]\rightarrow0$.	78F016
	MeOH	O_2	0.60				CP/Oc-14	A = 2,5-DMF; $\lambda_{exc} = 283$-373 nm.	70F735
	MeOH	O_2	0.63				CP/Oc-14	A = TME; $\lambda_{exc} = 283$-373 nm.	70F735
1.264	**Pyrene, excimer**								
	C_6H_6	1.9×10^{-3}, 9.0×10^{-3}	0.8			0.8	CL/Ac-49,38	S′ = A = DMA; rel. to $\phi_\Delta(S') = 1.0$. Assumed $f_T^{O_2} = 1$.	83F116
	MeOH	O_2	0.46				CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. Assumed $f_\Delta{}^T = 1$; $[S]\rightarrow\infty$.	78F016
1.265	**1-Pyrenecarboxaldehyde**								
	c-C_6H_{12}	O_2	0.87^T	1			PL/Ad-49,42	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $k_d = 5.0\times10^4$ s^{-1}, $k_A = 3.4\times10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.78^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	84F005
	C_6H_6	O_2	0.68^T	1			PL/Ad-49,42	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $k_d = 4.0\times10^4$ s^{-1}, $k_A = 8.0\times10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.57^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7600$ L mol^{-1} cm^{-1} at 532 nm.	84F005
1.266	**Pyridine, 2,6-bis(2-thienyl)-**								
	$CDCl_3$	$\sim1.16\times10^{-2}$	0.53^T				PL/Ad,ACt-49	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7640$ L mol^{-1} cm^{-1} at 525 nm. $p_A = 1$.	87E410
1.267	**α-Quaterthienyl**								
	EtOH	O_2	$\sim0.2^T$	~1			PL/Ac-14,42	A = DPBF; meas. $\phi_T(S) = 0.20^f$; $\lambda_{exc} = 353$ nm. $P_T^{O_2} = 1$, $p_A = 0.75$.	85N020
1.268	**Quinoline**								
	MeOH	O_2	0.09				CP/Oc-14	A = 2,5-DMF; $\lambda_{exc} = 283$-373 nm.	70F735
	MeOH	O_2	0.10				CP/Oc-14	A = TME; $\lambda_{exc} = 283$-373 nm.	70F735
1.269	**Quinoline-2-carboxylic acid, 4-hydroxy- (Kynurenic acid)**								
	D_2O pD = 7	air	0.16				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 337$ nm.	87F290

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.269	**Quinoline-2-carboxylic acid, 4-hydroxy- (Kynurenic acid)**—Continued								
	H_2O pH = 7.4	air	0.42				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; λ_{exc} = 332 nm. RNO as monitor of P.	91R141
1.270	**Quinoxaline**								
	C_6H_6	air	~0.91	~0.91			PL/Hp-52,42	λ_{exc} = 337 nm. Measured ϕ_T; assumed $P_T^{O_2} = 1$, $[S] > 5 \times 10^{-4}$ mol L^{-1}, $\phi_\Delta = 0.73$ extrapolating $[S] \to 0$.	91F198
1.271	**13-(*Z*)-Retinal**								
	CCl_4	air	0.6				MP/LI-56	S′ = PPDME; rel. to $\phi_\Delta(S') = 0.8$; λ_{exc} = 385 nm.	78F700
1.272	**(*all-E*)-Retinal**								
	$c\text{-}C_6H_{12}$	air		1			PL/Ad-49,39	A = DPBF; AC = S; λ_{exc} = 337 nm; used $k_d = 5 \times 10^4\ s^{-1}$, $k_A = 3.4 \times 10^8$ L $mol^{-1}\ s^{-1}$. ε_T(AC) not given.	85F041
	$c\text{-}C_6H_{12}$	O_2	0.66^T	~1			PL/Ad-49,42	A = DPBF; AC = BP; λ_{exc} = 337 nm; used $k_d = 5.0 \times 10^4\ s^{-1}$, $k_A = 3.4 \times 10^8$ L $mol^{-1}\ s^{-1}$, $\phi_T(S)$ = 0.4-0.7[f], $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7600 L $mol^{-1}\ cm^{-1}$ at 532 nm.	84F005
	CCl_4	air	0.6^T				MP/LI-56	S′ = PPDME; rel. to $\phi_\Delta(S') = 0.8$; λ_{exc} = 385 nm.	78F700
	EtOH	O_2	0.096^T				CP/Ac-15	A = 2,5-DMF; λ_{exc} = 365 nm.	78F201
	MeOH	air	0.13^T	1			PL/Ad-49,39	A = DPBF; λ_{exc} = 337 nm; used $k_d = 1 \times 10^5\ s^{-1}$, $k_A = 8 \times 10^8$ L $mol^{-1}\ s^{-1}$, $\phi_T(S)$ = 0.12[c]. ε_T(AC) not given.	85F041
	MeOH	O_2	0.20^T	~1			PL/Ad-49,42	A = DPBF; AC = BP; λ_{exc} = 337 nm; used $k_d = 1.0 \times 10^5\ s^{-1}$, $k_A = 8.1 \times 10^8$ L $mol^{-1}\ s^{-1}$, $\phi_T(S)$ = 0.12[f], $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7600 L $mol^{-1}\ cm^{-1}$ at 532 nm.	84F005
1.273	**(*all-E*)-Retinol**								
	$n\text{-}C_6H_{14}$	air		0.78			PL/Ad-61	S′ = NMTA; A = DPBF; TD = NMTA; rel. to $f_\Delta^T(S') = 1.1$; λ_{exc} = 337 nm. $P_T^{O_2} = 1$; cor. for S quenching.	85E190
	$n\text{-}C_6H_{14}$	1.4×10^{-4}	0.25				PL/Ad-43	S′ = An; A = DPBF; TD = Triphenylene; rel. to $\phi_\Delta(S') = 0.81$; λ_{exc} = 254 nm. Used $P_T^{O_2} = 1$, $f_\Delta^T(S') = 1$.	83E084
	C_6H_6	var			0.42		PL/Ad-49,39	A = DPBF; AC = BP; λ_{exc} = 337 nm; used $\varepsilon_T(AC)$ = 7.630 L $mol^{-1}\ cm^{-1}$ at 532 nm. $P_T^{O_2} = 1$; measured $f_T^{O_2} = 0.36$, $f_\Delta^S + (f_\Delta^T - \phi_T)f_T^{O_2} = 0.71$, used $f_\Delta^T = 0.75$.	85E190
	C_6H_6	air		0.75			PL/Ad-61	S′ = NMTA; A = DPBF; TD = NMTA; rel. to $f_\Delta^T(S') = 0.92$; λ_{exc} = 337 nm. $P_T^{O_2} = 1$; cor. for S quenching.	85E190
	MeOH	var.			0.30		PL/Ad-49,39	A = DPBF; AC = BP; λ_{exc} = 337 nm. $P_T^{O_2} = 1$; measured $f_T^{O_2} = 0.47$, $f_\Delta^S + (f_\Delta^T - \phi_T)f_T^{O_2} = 0.68$, used $f_\Delta^T = 0.72$.	85E190
	MeOH	air		0.78			PL/Ad-61	S′ = $Ru(bpy)_3^{2+}$; A = DPBF; TD = $Ru(bpy)_3^{2+}$; rel. to $f_\Delta^T(S') = 0.92$; λ_{exc} = 337 nm. $P_T^{O_2} = 1$; cor. for S quenching.	85E190
1.274	**Riboflavine (RF)**								
	D_2O	air[a]	0.3				MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$. Reference value in CCl_4.	82Z317
	H_2O pH = 7.4	air	0.49				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; λ_{exc} = 445 nm. RNO as monitor of P.	91R141

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.274	**Riboflavine (RF)**—Continued								
	H_2O/EtOH (1:1)	air[a]	0.5				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.3$[b]; $\lambda_{exc} = 337$ nm. Rel. to RF in D_2O.	86F144
	MeOD	$\sim 10^{-3}$	0.58* 0.48	 0.79			PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.61$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; rel. to S′ in EtOH; recalcd. using $\phi_\Delta(S') = 0.64$ [88Z155].	88A165
	MeOH	air[a]	0.47				PL/LI-56	S′ = Ery; rel. to $\phi_\Delta(S') = 0.60$.	87R138
	MeOH	air[a]	0.4				PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.3$[b]; $\lambda_{exc} = 337$ nm. Rel. to RF in D_2O.	86F144
1.275	**Riboflavine 5′-(dihydrogen phosphate) (FMN)**								
	H_2O pH = 7.4	air	0.49				CP/Pa-43	S′ = RB; A = Im; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 445$ nm. RNO as monitor of P.	91R141
1.276	**Riboflavin-2′,3′,4′,5′-tetraacetate**								
	CH_3CN	O_2	0.65				CP/Pa-14	$\lambda_{exc} = 442$ nm. A = Oleic, linoleic or linolenic acid; hydroperoxide formation.	89F484
1.277	**Rubicene (Benz(*a*)indeno(1,2,3-*hi*)aceanthrylene)**								
	C_6H_6	air	0.31				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	C_6H_6	air	0.24				CP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.67$.	88E609
	CCl_4	air	0.30				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CH_3CN	air	0.18				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$CHCl_3$	air	0.31				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CS_2	air	0.46				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$ClCF_2CCl_2F$	air	0.23				CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
1.278	**Rubrene (Tetracene, 5,6,11,12-tetraphenyl-, Rub)**								
	c-C_6H_{12}	O_2	0.95			1.4	CP/Ac-14,38	S′ = A = DPBF; $\lambda_{exc} = 546$ nm. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$; used $P_S^{O_2} = 0.67$ and $\phi_T = 0$.	79E611
	n-C_6H_{14}	O_2	1.1			1.5	CP/Ac-14,38	S′ = A = DPBF; $\lambda_{exc} = 546$ nm. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$; used $P_S^{O_2} = 0.78$ and $\phi_T = 0$.	79E611
	n-C_6H_{14}	O_2	1.2	≥0.54	≥0.54		CP/Ac-27	A = 2,5-DMF; $\lambda_{exc} = 313$ nm. $P_T^{O_2} = 1$; assumes $f_T^{O_2} = 1$; used $p_A = 1$.	79E643
	i-octane	O_2	1.1			1.4	CP/Ac-14,38	S′ = A = DPBF; $\lambda_{exc} = 546$ nm. $P_T^{O_2} = 1$; Assumed $f_T^{O_2} = 1$; used $P_S^{O_2} = 0.76$ and $\phi_T = 0$.	79E611
	$C_6H_5CH_3$	air				2	PL/Ad,St-48	A = S; $\lambda_{exc} = 530$ nm; used $k_d = 3.2 \times 10^4\ s^{-1}$, $k_A = 2.5 \times 10^7\ L\ mol^{-1}\ s^{-1}$, $\varepsilon_T(S) = 26000\ L\ mol^{-1}\ cm^{-1}$ at 500 nm. $n_\Delta = 2$.	82E072
	$C_6H_5CH_3$	$(0.6\text{-}1.2) \times 10^{-3}$					CP/Ac-14,38	A = S; $\lambda_{exc} = 436$ nm. Measured $f_\Delta{}^T + f_\Delta{}^S f_T^{O_2} = 1.6$	756223
	$C_6H_5CH_3$	O_2 (10 atm)	1.8				PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	82E010
	C_6H_6	$(0.6\text{-}1.2) \times 10^{-3}$					CP/Ac-14,38	A = S; $\lambda_{exc} = 436$ nm. Measured $f_\Delta{}^T + f_\Delta{}^S f_T^{O_2} = 1.7$.	756223
	C_6H_6	1.8×10^{-3}	0.36				CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S') = 0.50$; $\lambda_{exc} = 535, 546, 577$ nm. rel. to S′ in MeOH.	83F608
	C_6H_6	1.9×10^{-3}	0.30				CP/Ac-46	S′ = BP; A = S; rel. to $\phi_\Delta(S') = 0.54$; $\lambda_{exc} = 365$ nm. Assumed $f_T^{O_2} = 1$.	81F364
	C_6H_6	air	0.44				CP/Ac-14	A = S; $\lambda_{exc} = 365$ nm.	81F017
	C_6H_6	air[a]	0.07^T			1.9	CP/Ac-14,40	A = S. Assumed $f_T^{O_2} = 1$; $f_\Delta{}^T + f_\Delta{}^S$ from ϕ_Δ when $P_S^{O_2} = 1$; $\phi_T f_\Delta{}^T = \phi_\Delta$ when $P_S^{O_2} = 0$.	767422
	C_6H_6	air[a]			≥0.67	≥1.7	CP/Ac-14,38	A = S. Assumed $f_\Delta{}^T = 1$ and $f_T^{O_2} = 1$.	76F905
	C_6H_6	4.6×10^{-3}	0.64				CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S') = 0.50$; $\lambda_{exc} = 535, 546, 577$ nm. rel. to S′ in MeOH.	83F608

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.278	**Rubrene (Tetracene, 5,6,11,12-tetraphenyl-, Rub)**—Continued								
	C_6H_6	6.5×10^{-3}	1.0				CP/Pa-14	A = S; P = 5,12-Dihydro-5,6,11,12-tetraphenyl-5,12-epidioxytetracene; λ_{exc} = 546 nm.	337002 377005
	C_6H_6	O_2 var.					CP/Ac-14,38	A = S; λ_{exc} = 435.8 nm. $\phi_T f_\Delta^T/(f_\Delta^T + f_\Delta^S)$ = 0.04 ± 0.02.	68F286
	C_6H_6	9.1×10^{-3}	0.90				CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S')$ = 0.50; λ_{exc} = 535, 546, 577 nm. rel. to S′ in MeOH; $\phi_T f_\Delta^T$ = 0.03 ($P_S^{O_2}$ = 0); $f_\Delta^S + f_\Delta^T f_T^{O_2}$ = 1.5	83F608
	C_6H_6	9.0×10^{-3}	0.88			1.4	CP/Ac-46	S′ = BP; A = S; rel. to $\phi_\Delta(S')$ = 0.90; λ_{exc} = 365 nm; used $\phi_T(S)$ = 0.03. Assumed $f_T^{O_2}$ = 1.	81F364
	C_6H_6	O_2	0.91			1.5	CP/Ac-14,38	S′ = A = DPBF; λ_{exc} = 546 nm. $P_T^{O_2}$ = 1; Assumed $f_T^{O_2}$ = 1; used $P_S^{O_2}$ = 0.62 and ϕ_T = 0.	79E611
	C_6H_6	O_2	1^{ST}				CP/Ac-14	A = S; λ_{exc} = 366, 436, 546 nm.	34F004
	C_6H_6	$\rightarrow \infty$	1.2^{ST}			~1.2	CP/Ac-14,38	A = DPBF; λ_{exc} = 545 nm. Assumed $f_T^{O_2}$ = 1, extrapolated ϕ_Δ = 1.2 when $[O_2] \rightarrow \infty$.	78E036
	CH_3COCH_3	O_2	0.88			1.5	CP/Ac-14,38	S′ = A = DPBF; λ_{exc} = 546 nm. $P_T^{O_2}$ = 1; Assumed $f_T^{O_2}$ = 1; used $P_S^{O_2}$ = 0.58 and ϕ_T = 0.	79E611
	$CHCl_3$	$(0.3\text{-}5) \times 10^{-3}$					CP/Ac-14,38	A = S; λ_{exc} = 436 nm. Assumed $f_T^{O_2}$ = 1, f_Δ^T = f_Δ^S = 1, measured $f_\Delta^T + f_\Delta^S f_T^{O_2}$ = 2.1; ϕ_Δ = 0.11 when $P_S^{O_2}$ = 0.	756223
	$C_6H_3Cl_3$	$(0.5\text{-}2.5) \times 10^{-3}$					CP/Ac-14,38	A = S; λ_{exc} = 436 nm. Measured $f_\Delta^T + f_\Delta^S f_T^{O_2}$ = 1.7.	756223
	CCl_4	$(0.3\text{-}3) \times 10^{-3}$					CP/Ac-14,38	A = S; λ_{exc} = 436 nm. Measured $f_\Delta^T + f_\Delta^S f_T^{O_2}$ = 1.9.	756223
	CS_2	$(0.5\text{-}1) \times 10^{-3}$					CP/Ac-14,38	A = S; λ_{exc} = 436 nm. Measured $f_\Delta^T + f_\Delta^S f_T^{O_2}$ = 2.1	756223
	CS_2	$(2\text{-}9) \times 10^{-3}$		1	1	2	CP/Ac-14,38	A = DPBF; λ_{exc} = 546 nm. Assumed $f_T^{O_2}$ = 1, $\phi_T f_\Delta^T$ = 0.21.	84F197
1.279	**(*E*)-Stilbene**								
	C_6H_6	air[a]		~0.08			PR/βCb-59	S′ = BP; rel. to $f_\Delta^T(S')$ = 0.35. Measured $f_\Delta^T(S)/f_\Delta^T(S')$ = 0.23.	76F904
	C_6H_6	O_2		0.21* 0.18			PL/LI-60	S′ = 2-ACN; rel. to $f_\Delta^T(S')$ = 0.7; λ_{exc} = 355 nm. $P_T^{O_2}$ >0.96.	85F291
	C_6H_6	O_2		0.22* 0.18			PL/LI-60	S′ = BP; rel. to $f_\Delta^T(S')$ = 0.29; λ_{exc} = 355 nm. $P_T^{O_2}$ >0.96.	85F291
1.280	**Sydnone, 3,4-diphenyl-**								
	C_6H_6	air		0.78			PL/Ad,TDt-62	A = DPBF; AC = TD = NMTA; λ_{exc} = 485 nm; used $k_d = 4.0 \times 10^4\ s^{-1}$, $k_A = 8.0 \times 10^8$ L $mol^{-1}\ s^{-1}$, ε_T(AC) = 9300 L $mol^{-1}\ cm^{-1}$ at 520 nm. $P_T^{O_2}$ = 0.82.	86A380
1.281	**Sydnone, 3-(4-methylphenyl)-**								
	C_6H_6	air		0.38			PL/Ad,TDt-62	A = DPBF; AC = TD = CQ; λ_{exc} = 485 nm; used $k_d = 4.0 \times 10^4\ s^{-1}$, $k_A = 8.0 \times 10^8$ L $mol^{-1}\ s^{-1}$, ε_T(AC) = 900 L $mol^{-1}\ cm^{-1}$ at 700 nm. $P_T^{O_2}$ = 0.89.	86A380
1.282	**Sydnone, 3-(4-methylphenyl)-4-phenyl-**								
	C_6H_6	air		0.88			PL/Ad,TDt-62	A = DPBF; AC = TD = NMTA; λ_{exc} = 485 nm; used $k_d = 4.0 \times 10^4\ s^{-1}$, $k_A = 8.0 \times 10^8$ L $mol^{-1}\ s^{-1}$, ε_T(AC) = 9300 L $mol^{-1}\ cm^{-1}$ at 520 nm. $P_T^{O_2}$ = 0.78.	86A380

Table 1. Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.283	**Sydnone, 3-phenyl-**								
	C_6H_6	air		0.80			PL/Ad,TDt-62	A = DPBF; AC = TD = CQ; λ_{exc} = 485 nm; used $k_d = 4.0 \times 10^4$ s^{-1}, $k_A = 8.0 \times 10^8$ L mol^{-1} s^{-1}, ε_T(AC) = 900 L mol^{-1} cm^{-1} at 700 nm. $P_T^{O_2} = 0.88$.	86A380
1.284	***p*-Terphenyl**								
	C_6H_6	O_2		0.9			PR/Ad,St-49,42	A = DPBF; used ϕ_T(S) = 0.11, ε_T(S) = 90,000 L mol^{-1} cm^{-1} at 460 nm. Measured $G(^3S^*)$.	78E263
1.285	**α-Terthienyl**								
	C_6D_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.67^T				PL/LI-56	S′ = Np; rel. to ϕ_Δ(S′) = 0.54; λ_{exc} = 355 nm.	90E691
	C_6D_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.84^T				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.84; λ_{exc} = 355 nm.	90E691
	C_6H_6	air	0.75^T	~0.7			PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.83; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	CD_3CN	$(1.7\text{-}8.1) \times 10^{-3}$	0.79^T				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.84; λ_{exc} = 355 nm.	90E691
	CD_3OD	air	0.67^T	~0.7			PL/LI-56,42	S′ = An; rel. to ϕ_Δ(S′) = 0.55; meas. ϕ_T(S) = ~0.9-1.0; λ_{exc} = 337 nm.	90F355
	CD_3OD	air	0.70^T	~0.7			PL/LI-56,42	S′ = Ru(bpy)$_3^{2+}$; rel. to ϕ_Δ(S′) = 0.86; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	$CDCl_3$	air	0.73^T	~0.7			PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.84; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.86^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used ϕ_T(AC) = 1, ε_T(AC) = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410
	CH_2Cl_2	air	0.75^T	~0.7			PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.89; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	CH_3CN	air	0.68^T	~0.7			PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.82; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	$CHCl_3$	air	0.67^T	~0.7			PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.84; meas. ϕ_T(S) = ~0.9-1; λ_{exc} = 337 nm.	90F355
	EtOH	O_2	$\sim 0.2^T$	~1			PL/Ac-14,42	A = DPBF; meas. ϕ_T(S) = 0.20^f; λ_{exc} = 353 nm. $P_T^{O_2} = 1$, p_A = 0.75.	85N020
	EtOH/H_2O (95:5)	air	0.22^T	~1			CP/Ac-14,42	A = Im; λ_{exc} = 365 nm; used ϕ_T(S) = 0.20.	89F115
1.286	**2,2′:5′,2″-Terthiophene, 5-bromo-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.70^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used ϕ_T(AC) = 1, ε_T(AC) = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410
1.287	**2,2′:5′,2″-Terthiophene, 5-cyano-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.86^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used ϕ_T(AC) = 1, ε_T(AC) = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410
1.288	**2,2′:5′,2″-Terthiophene, 5,5″-dibromo-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.69^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used ϕ_T(AC) = 1, ε_T(AC) = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410
	EtOH	O_2	$\sim 0.3^T$	~1			PL/Ac-14,42	A = DPBF; meas. ϕ_T(S) = 0.35^f; λ_{exc} = 353 nm. $P_T^{O_2} = 1$, p_A = 0.75.	85N020
1.289	**2,2′:5′,2″-Terthiophene, 5-methyl-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.93^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used ϕ_T(AC) = 1, ε_T(AC) = 7640 L mol^{-1} cm^{-1} at 525 nm. p_A = 1.	87E410

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.290	**2,2′:5′,2″-Terthiophene-5-carboxylic acid**								
	EtOH	O_2	~0.2[T]	~1			PL/Ac-14,42	A = DPBF; meas. $\phi_T(S) = 0.2^f$; $\lambda_{exc} = 353$ nm. $P_T^{O_2} = 1, p_A = 0.75$.	85N020
1.291	**Tetracene**								
	$C_6H_5CH_3$	O_2	0.86				PL/LI-38,56	used $\phi_T(S) = 0.61$. Assumed $f_T^{O_2} = 1$; used $f_\Delta^T + f_\Delta^S = 1.2$.	87E668
	$C_6H_5CH_3$	0.2 atm O_2	0.71				PL/LI-38,56	used $\phi_T(S) = 0.61$. Assumed $f_T^{O_2} = 1$; used $f_\Delta^T + f_\Delta^S = 1.2$.	87E668
	$C_6H_5CH_3$	$(2\text{-}9) \times 10^{-3}$				1.2	CP/Ac-14,38	A = DPBF; $\lambda_{exc} = 470$ nm. Assumed $f_T^{O_2} = 1$, $\phi_T f_\Delta^T = 0.61$.	84F197
	C_6H_6	air	0.70				CP/Ac-40	A = DPBF. Assumed $f_\Delta^S = 0, f_\Delta^T = 1$.	78E036
	C_6H_6	O_2	0.83				CP/Ac-40	A = DPBF. Assumed $f_\Delta^S = 0, f_\Delta^T = 1$.	78E036
	C_6H_6	air	0.68				CP/Ac-14	A = DPBF.	78E036
	C_6H_6	O_2	0.85				CP/Ac-14	A = DPBF.	78E036
	C_6H_6	air[a]	0.71[T]			1.2	CP/Ac-14,40	A = S. Assumed $f_T^{O_2} = 1$; $f_\Delta^T + f_\Delta^T$ from ϕ_Δ when $P_S^{O_2} = 1$; $\phi_T f_\Delta^T = \phi_\Delta$ when $P_S^{O_2} = 0$.	767422
	C_6H_6	air[a]		~1	~0	~1	CP/Ac-14,38	A = S. Assumed $f_\Delta^T = 1$ and $f_T^{O_2} = 1$.	76F905
	C_6H_6	O_2 var.					CP/Ac-14,38	A = S; $\lambda_{exc} = 435.8$ nm. $\phi_T f_\Delta^T / (f_\Delta^T + f_\Delta^S) = 0.61$.	68F286
1.292	**α-Tetralone**								
	C_6H_6	O_2	0.25[T]	0.25			PL/Hp-52,42	$\lambda_{exc} = 355$ nm; used $\phi_T(S) = 1$. Measured $\phi_\Delta = 0.25$, $P_T^{O_2} = 1$ and ϕ_F.	88E449
	C_6H_6	O_2	0.29[T]	0.25			PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 1$. Measured $P_T^{O_2} = 1$.	88E449
1.293	**Thiobenzophenone, 4,4′-dimethoxy- (DMTBP)**								
	C_6H_6	O_2	0.88* 1.0[T]	 1.0			PL/Ad-43,42	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S') = 0.4$; meas. $\phi_T(S) = 1^f$; $\lambda_{exc} = 337$ nm. Assumed $\phi_T(S) = \phi_T(S')$.	84A221
	$CHCl_3$	air[a]	1.0[T]	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1$. $[S] \to 0$, $\phi_\Delta = 0.83$ at $[S] = 0.01$ mol L^{-1}.	83F028 82F140
1.294	**Thiobenzophenone, 4-phenyl-**								
	$CHCl_3$	air[a]	1.0[T]	1.0			CP/Ac-14,42	A = DTBF; used $\phi_T(S) = 1$. $[S] \to 0$, $\phi_\Delta = 0.56$ at $[S] = 0.01$ mol L^{-1}.	83F028 82F140
1.295	**Thiocoumarin**								
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	0.7* 0.8[T]	 0.8			PL/Ad-43,39	S′ = BP; A = DPBF; rel. to $\phi_\Delta(S') = 0.4$; meas. $\phi_T(S) = 1$; $\lambda_{exc} = 337$ nm. Used $P_S^{O_2} = 0$.	86A240
	C_6H_6	$(1.9\text{-}9.1) \times 10^{-3}$	1.0[T]	1.0			PL/Ad-43,39	S′ = DMTBP; A = DPBF; rel. to $\phi_\Delta(S') = 1$; meas. $\phi_T(S) = 1$; $\lambda_{exc} = 532$ nm. Used $P_S^{O_2} = 0$.	86A240
1.296	**Thiophene, 2,5-diphenyl-**								
	EtOH	O_2	~0.3	~1			PL/Ac-14,42	A = DPBF; meas. $\phi_T(S) = 0.30$; $\lambda_{exc} = 353$ nm. $P_T^{O_2} = 1, p_A = 0.75$.	85N020
1.297	**Thiophene, 2-(1-naphthalenyl)-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.76[T]				PL/Ad,ACt-49	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 525$ L mol^{-1} cm^{-1} at 7640 nm. $p_A = 1$.	87E410
1.298	**Thiophene, 2-(2-naphthalenyl)-**								
	$CDCl_3$	$\sim 1.16 \times 10^{-2}$	0.63[T]				PL/Ad,ACt-49	A = DPBF; AC = BP; $\lambda_{exc} = 337$ nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC) = 7640$ L mol^{-1} cm^{-1} at 525 nm. $p_A = 1$.	87E410

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	$f_\Delta{}^S$	Σf or n_Δ	Method	Comment	Ref.
1.299	**Thiophene, 2,2′-(1,3-phenylene)bis-**								
	$CDCl_3$	$\sim 1.16\times10^{-2}$	0.75^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7640 L mol^{-1} cm^{-1} at 525 nm. $p_A = 1$.	87E410
1.300	**Thiophene, 2,2′-(1,4-phenylene)bis-**								
	$CDCl_3$	$\sim 1.16\times10^{-2}$	0.69^T				PL/Ad,ACt-49	A = DPBF; AC = BP; λ_{exc} = 337 nm; used $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7640 L mol^{-1} cm^{-1} at 525 nm. $p_A = 1$.	87E410
1.301	**4-Thiouridine**								
	CH_3CN	air	0.6^T	1			PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; meas. $\phi_T(S)$ = 0.61; λ_{exc} = 355 nm. $P_T^{O_2} = 0.92$.	90E312
	CH_3CN	O_2	0.4^T	0.67			PL/Hp-53,42	meas. $\phi_T(S) = 0.61$; λ_{exc} = 355 nm; used $\phi_F(S)$ = 0. $P_T^{O_2}$ = >0.98.	90E312
	CH_3CN	O_2	0.5^T	0.84			PL/Hp-52,42	meas. $\phi_T(S) = 0.61$; λ_{exc} = 353 nm. $P_T^{O_2}$ = >0.98.	90E312
	CH_3CN	O_2	0.70^T				PL/LI-56,42	S′ = DCA; rel. to $\phi_\Delta(S') = 1.6$; λ_{exc} = 355 nm.	83F604
	D_2O	air	0.18^T	0.93			PL/LI-56,42	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.80$; meas. $\phi_T(S) = 0.67$; λ_{exc} = 353 nm. $P_T^{O_2} = 0.29$.	90E312
1.302	**1,4,7-Triazacyclononanetri(isothiocyanato)chromium(III) (Cr(tacn)(NCS)$_3$)**								
	$(CH_3)_2CO$	O_2	0.62				CP/Pa-43	S′ = RB; A = Furan; P = Furan endoperoxide; rel. to $\phi_\Delta(S') = 0.80^b$.	89F067
1.303	**Tribenzo[*a,f,j*]perylene, 9,18-diphenyl- (Mesodiphenylbenzhelianthrene, MDBH)**								
	$C_6H_5CH_2OH$	air	0.17				CP/Ac-A.18	A = S; λ_{exc} = 632.8 nm. $f_r{}^A = 0.026$.	87F480
	m-Cresol	air	0.12				CP/Ac-A.18	A = S; λ_{exc} = 632.8 nm; used $\phi_T(S) = 0.61$. $f_r{}^A = 0.026$.	87F480
	CCl_4	air	0.18				CP/Ac-14,38	A = S; meas. $\phi_T(S) = 0.09$; λ_{exc} = 632.8 nm. $f_T^{O_2} = 1$, $f_r{}^A = 0.026$, $[O_2]$ varied, $(f_\Delta{}^S + f_\Delta{}^T f_T^{O_2})$ = 0.91.	87F479
1.304	**Triphenylene**								
	c-C_6H_{12}	$\to\infty$	0.49^{ST}				PL/LI-56	S′ = Py; rel. to $\phi_\Delta(S') = 0.81$; λ_{exc} = 355 nm.	91E297
	n-C_6H_{14}	air	0.25				PL/Ad-43	S′ = An; A = DPBF; rel. to $\phi_\Delta(S') = 1$; λ_{exc} = 264 nm. $P_T^{O_2} = 1$.	82E258
	CH_3CN	$\to\infty$	0.27^{ST}				PL/LI-56	S′ = DCA; rel. to $\phi_\Delta(S') = 2.0$; λ_{exc} = 355 nm.	91E297
1.305	**Tris(2,2′-bipyridine)iridium(III) ion**								
	MeOH	O_2	$\sim 1^T$				CL/Oc-14	A = TME; λ_{exc} = 488 nm.	777221
1.306	**Tris(2,2′-bipyridine)ruthenium(II) ion**								
	MeOH	air[a]	0.81^T	0.92			PL/Ad-49,39	A = DPBF; AC = BP; λ_{exc} = 532 nm; used k_d = 1.0×10^5 s^{-1}, $k_A = 8.1\times10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.95^c$, $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7600 L mol^{-1} cm^{-1} at 532 nm. $P_T^{O_2} = 0.93$.	85E190
	MeOH	O_2	0.83^T	0.94			PL/Ad-49,41	A = DPBF; AC = BP; λ_{exc} = 337 nm; used k_d = 1.0×10^5 s^{-1}, $k_A = 8.1\times10^8$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.95^f$, $\phi_T(AC) = 1$, $\varepsilon_T(AC)$ = 7600 L mol^{-1} cm^{-1} at 532 nm. $P_T^{O_2} = 0.93$.	84F005
	MeOH	O_2	0.90^T	0.95			CP/Ac-43,42	S′ = RB; A = Bu_2S; rel. to $\phi_\Delta(S') = 0.80^b$; λ_{exc} = 546 nm; used $\phi_T(S) = 0.95^d$. Measured $P_T^{O_2}$ = 1.	80F304
	MeOH	O_2	0.86^T	0.91			CL/Oc-14,42	A = TME; λ_{exc} = 488, 514.4, 457.9 nm; used $\phi_T(S) = 0.95^d$. Used $P_T^{O_2} = 1$.	767423

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.
1.307	**Tris(1,10-phenanthroline)iridium(III) ion**								
	MeOH	O_2	$\sim1^T$				CL/Oc-14	A = TME; λ_{exc} = 488 nm.	777221
1.308	**Tris(1,10-phenanthroline)osmium(II) ion**								
	MeOH	O_2	0.76^T				CL/Oc-14	A = TME; λ_{exc} = 488 nm.	777221
1.309	**Tris(1,10-phenanthroline)ruthenium(II) ion**								
	MeOH	O_2	0.75^T				CL/Oc-14	A = TME; λ_{exc} = 488 nm.	777221
	MeOH	O_2	0.95^T				CL/Oc-14	A = H_2NCSNH_2; λ_{exc} = 488 nm.	777221
1.310	**Vitamin D_3**								
	C_6H_6	2×10^{-3}		0.28* 0.25			PL/LI-60	S′ = Np; TD = p-MAP; rel. to f_Δ^T(S′) = 0.55; λ_{exc} = 355 nm. $P_T^{O_2}\rightarrow 1$; Cor. for 12% oxygen quenching of p-MAP triplet.	90E030
	C_6H_6	2×10^{-3}		0.30* 0.25			PL/LI-60	S′ = BP; rel. to f_Δ^T(S′) = 0.29; λ_{exc} = 355 nm. Measured $P_T^{O_2}$.	89A235
1.311	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-4,5-diiodo-, dianion**								
	DMF	air[a]	0.30				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618
1.312	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-2,4,5,7-tetrabromo-, dianion**								
	DMF	air[a]	0.13				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618
1.313	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-2,4,5,7-tetraiodo-, dianion**								
	DMF	air[a]	0.44				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618
1.314	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-2,4,5-triiodo-, dianion**								
	DMF	air[a]	0.41				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618
1.315	**Xanthen-3-one, 9-(2,3,4,5-tetrachlorophenyl)-6-hydroxy-2,4,5,7,-tetraiodo-, anion**								
	MeOH	air[a]	0.87				CP/Ac-43	S′ = Eos; A = DPBF; rel. to ϕ_Δ(S′) = 0.32. Rel. to S′ in ethanol.	90F251
	MeOH	air[a]	0.76				CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	90F251
1.316	**Xanthen-9-one**								
	C_6H_6	air[a]	0.33^T	0.33			PL/βCb-43,42	S′ = BP; rel. to f_Δ^T(S′) = 0.35; used ϕ_T(S) = 1[d]. Measured ϕ_Δ(S)/ϕ_Δ(S′) = 0.95.	76F904
	C_6H_6	O_2	0.24^T	0.28			PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.83; used ϕ_T(S) = 1. Measured $P_T^{O_2}$ = 0.82.	88E449
	C_6H_6	O_2	0.28^T	0.28			PL/Hp-52,42	λ_{exc} = 355 nm; used ϕ_T(S) = 1. Measured ϕ_Δ = 0.23, $P_T^{O_2}$ = 0.82 and ϕ_F.	88E449
1.317	**O_2:solvent CT state**								
	Decalin	air	~0.12				PL/LI-56	S′ = Biph; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 239 nm.	89E309
	c-C_6H_{12}	air	~0.22				PL/LI-56	S′ = Biph; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 239 nm.	89E309
	c-C_8H_{16}	air	~0.18				PL/LI-56	S′ = Biph; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 239 nm.	89E309
	1,3,5-$C_6H_3(CH_3)_3$	air	~0.17				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.8; λ_{exc} = 355 nm.	89E309
	1,2-$C_6H_4(CH_3)_2$	air	~0.20				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.8; λ_{exc} = 355 nm.	89E309
	1,4-$C_6H_4(CH_3)_2$	air	~0.20				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.8; λ_{exc} = 355 nm.	89E309
	$C_6H_5CH_3$	O_2	0.25				PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.82; λ_{exc} = 347 nm.	90E760
	$C_6H_5CH_3$	air	~0.20				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.8; λ_{exc} = 355 nm.	89E309
	C_6H_6	air	~0.20				PL/LI-56	S′ = Ac; rel. to ϕ_Δ(S′) = 0.8; λ_{exc} = 355 nm.	89E309

[a] Oxygen concentration not given; assumed to be air saturated.
[b] Value of ϕ_Δ(S′) used in this work to calculate ϕ_Δ(S) from authors' reported ϕ_Δ(S)/ϕ_Δ(S′).

Table 1, Quantum yields of photosensitized production of singlet oxygen.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	f_Δ^S	Σf or n_Δ	Method	Comment	Ref.

[c] Value of $\phi_T(S)$ from the literature used in this work to calculate ϕ_Δ.
[d] Value of $\phi_T(S)$ from the literature used in this work to calculate f_Δ^T.
[e] Value of $\phi_T(S)$ measured or quoted by the authors, used in this work to calculate ϕ_Δ.
[f] Value of $\phi_T(S)$ measured or quoted by the authors, used in this work to calculate f_Δ^T.
[g] Value of $\phi_T(S)$ used in this work to calculate ϕ_Δ or f_Δ^T, average of 0.73 [776258] and 1.0 [81E147].
[T] Value corrected for 100% quenching of T_1.
[ST] Value corrected for 100% quenching of S_1 and T_1.
* Values recalculated using $\phi_\Delta(S')$ or $f_\Delta^T(S')$ from Table 4 or from the quoted reference.

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.1	**Bacteriochlorophyll *a***						
	$(C_2H_5)_2O$	air[a]	0.43		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	C_5H_5N	air[a]	0.4		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	C_6D_6	air[a]	0.34		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.7$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.5$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$.	87R185
	C_6H_6	air[a]	0.40* 0.35		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.32$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 1$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$.	87R185
	CCl_4	O_2	0.6		MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$. Used $P_T^{O_2} = 1$; supersedes [79A010], [77E617], [78E881].	85F517
	D_2O (mic)	air[a]	0.11		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. cont. 2% Triton X-100	90E324
	D_2O/EtOH (95:5)	air[a]	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	MeOD	air[a]	0.2		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.22$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = \sim 1$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$.	87R185
2.2	**Bacteriochlorophyll *b***						
	$(C_2H_5)_2O$	air[a]	0.48		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	C_5H_5N	air[a]	0.43		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	CCl_4	O_2	0.65		MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	85F517
	D_2O (mic)	air[a]	0.15		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. cont. 2% Triton X-100.	90E324
	D_2O/EtOH (95:5)	air[a]	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
2.3	**Chlorophyll *a***						
	$(C_2H_5)_2O$	air[a]	0.52		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	i-$C_5H_{11}OH$	air[a]	0.77		CP/Oc-14	A = ATU; $\lambda_{exc} = 436$ nm.	56F007
	C_5H_5N	air[a]	0.59		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	C_5H_5N	O_2	0.49		CP/Oc-14	A = H_2NCSNH_2; $\lambda_{exc} = 430$ nm. Assumed $f_r^A = 2$.	737347 74E522
	c-$C_6H_{11}OH$	air[a]	0.77		CP/Oc-14	A = ATU; $\lambda_{exc} = 436$ nm.	56F007
	$C_6H_5CH_2OH$	air[a]	0.77		CP/Oc-14	A = ATU; $\lambda_{exc} = 436$ nm.	56F007
	$C_6H_5CH_3$	air[a]	0.60		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	$C_6H_5CH_3$	8.5×10^{-3}	0.68		CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S') = 0.50$. Rel. to S′ in MeOH.	84F191
	C_6H_6	9.1×10^{-3}	0.60		CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S') = 0.50$. Rel. to S′ in MeOH.	84F191
	CCl_4	air	0.57		MP/LI-56	S′ = Ph a. $P_T^{O_2} = 1$; reported 0.55 in [79A010]; recalcd. in [90R045] rel. to ϕ_Δ(TPP) = 0.70.	79A010 90R045
	CH_3CN	air[a]	0.60		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	D_2O (mic)	air[a]	0.35		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. cont. 2% Triton X-100.	90E324
	D_2O/EtOH (95:5)	air[a]	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90E324
	H_2O (mic) pH = 7.0	air	0.70-0.85		CP/Oc-14	A = Im; P = Imidazole endoperoxide; $\lambda_{exc} = 660$ nm. Soln. contg. 1% Triton X-100; assumed $f_r^A = 0.17$-0.2.	79N115
	MeOH	air[a]	0.77		CP/Oc-14	A = ATU; $\lambda_{exc} = 436$ nm.	56F007
2.4	**Chlorophyll *b***						
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	C_6D_6	1.2% O_2 in N_2		0.92	PR/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S') = 0.55$. $P_T^{O_2} = 1$; cor. for energy transfer efficiency.	91A358
	CH_3CN	air[a]	0.85		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.5	**Chlorophyll (oil soluble)**						
	C_6H_6	9.1×10^{-3}	0.50		CP/Oc-43	S′ = MB^+; A = TME; rel. to $\phi_\Delta(S') = 0.50$. Rel. to S′ in MeOH.	84F191
2.6	**[22]Coproporphyrin II**						
	CH_2Cl_2	air[a]	1.1		CP/Pa-43	S′ = RB; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.80$[b].	90R215
2.7	**Methyl acetal of oxidized octaethylpurpurin ethyl ester**						
	MeOH	air	0.4		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.6$. $f_\Delta^T = 0.7$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; secondary $\phi_\Delta(S') = 0.41$, S′ = ZnPCS.	90E491
2.8	**Naphthalocyanine, 2,11,20,29-tetrakis(1,1-dimethylethyl)-**						
	CCl_4	air[a]	0.15* 0.17		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.9	**Naphthalocyanine, 2,11,20,29-tetrakis(1,1-dimethylethyl)-, chloroaluminum(III)**						
	CCl_4	air[a]	0.37* 0.42		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.10	**Naphthalocyanine, 2,11,20,29-tetrakis(1,1-dimethylethyl)-, copper(II)**						
	CCl_4	air[a]	0		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm. Not detectable.	90R204
2.11	**Naphthalocyanine, bis(trihexylsilanolato)silicon (SiNC)**						
	C_6H_6	O_2	0.35		PL/LI-56	S′ = Np; rel. to $\phi_\Delta(S') = 0.55$; meas. $\phi_T(S) = 0.39$; $\lambda_{exc} = 355$ nm.	87R032
	C_6D_6	air	0.19		PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.20$; $\lambda_{exc} = 355$ nm.	88E657
2.12	**Pheophytin *a***						
	$(C_2H_5)_2O$	air	0.67		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045
	C_5H_5N	O_2	0.64		CP/Oc-14	A = H_2NCSNH_2. Used $f_r^A = 2$.	74E522
	$C_6H_5CH_3$	air[a]	0.73		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	CCl_4	air	0.71* 0.80		MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045 79A010
	CH_3CN	air[a]	0.85		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	D_2O/EtOH (90:10) (mic)	air	0.70		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$. Soln. cont. 2% Triton X-100.	90R045
	D_2O/EtOH (95:5)	air	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045
	EtOH	air	0.60		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045
2.13	**Pheophytin *b***						
	$C_6H_5CH_3$	air[a]	0.70		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	CH_3CN	air[a]	0.84		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
2.14	**20-Phorbinecarboxylic acid, 3,4-didehydro-3,4,8,9,13,14,18,19-octaethyl-18,19-dihydro-, ethyl ester (Octaethyldihydropurpurin ethyl ester)**						
	MeOH	air	0.71		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.86$. $f_\Delta^T = 0.83$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; secondary $\phi_\Delta(S') = 0.41$, S′ = ZnPCS.	90E491
2.15	**20-Phorbinecarboxylic acid, 3,4-didehydro-3,4,8,9,13,14,18,19-octaethyl-18,19-dihydro-, ethyl ester, dichlorotin(IV)**						
	MeOH	air	0.82		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.96$. $f_\Delta^T = 0.85$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; secondary $\phi_\Delta(S') = 0.41$, S′ = ZnPCS.	90E491
2.16	**20-Phorbinecarboxylic acid, 3,4,20,21-tetradehydro-3,4,8,9,13,14,18,19-octaethyl-18,19-dihydro-, ethyl ester (Octaethylpurpurin, ethyl ester)**						
	C_6H_6	air[a]	0.70		PL/LI-56,42	S′ = BChl a; rel. to $\phi_\Delta(S') = 0.35$; meas. $\phi_T(S) = 0.81$; $\lambda_{exc} = 694$ nm. $f_\Delta^T = 0.86$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	88R200
	C_6H_6	air[a]	0.74* 0.65		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.81$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.80$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	88R200
	MeOH	air	0.68		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.82$. $f_\Delta^T = 0.83$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; secondary $\phi_\Delta(S') = 0.41$, S′ = ZnPCS.	90E491

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.17	**20-Phorbinecarboxylic acid, 3,4,20,21-tetradehydro-4,9,14,19-tetraethyl-18,19-dihydro-3,8,13,18-tetramethyl-, ethyl ester, zinc(II) (Etiopurpurin ethyl ester, zinc(II))**						
	C_6H_6	air[a]	0.54		PL/LI-56,42	S′ = BChl a; rel. to ϕ_Δ(S′) = 0.35; meas. ϕ_T(S) = 0.84; λ_{exc} = 694 nm. f_Δ^T = 0.71 assuming $P_S^{O_2}$ = 0; $P_T^{O_2}$ = 1.	88R200
	C_6H_6	air[a]	0.68* 0.60		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; meas. ϕ_T(S) = 0.84; λ_{exc} = 347 nm. f_Δ^T = 0.64 assuming $P_S^{O_2}$ = 0; $P_T^{O_2}$ = 1.	88R200
2.18	**3-Phorbinepropanoic acid, 9-acetyl-14-ethyl-13,14-dihydro-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-, 3,7,11,15-tetramethyl-2-hexadecenyl ester (Bacteriopheophytin *a*)**						
	$(C_2H_5)_2O$	air[a]	0.48		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90E324
	C_5H_5N	air[a]	0.8		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90E324
	C_6D_6	air[a]	0.53* 0.46		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; meas. ϕ_T(S) = 0.8; λ_{exc} = 347 nm. f_Δ^T = 0.6 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185
	C_6H_6	air[a]	0.46		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; meas. ϕ_T(S) = 0.73; λ_{exc} = 347 nm. f_Δ^T = 0.63 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185
	CCl_4	O_2	0.75		MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85F517
	CCl_4	air	0.69		MP/LI-56	S′ = Chl a; rel. to ϕ_Δ(S′) = 0.55. $P_T^{O_2}$ = 1.	79A010
	D_2O (mic)	air[a]	0.36		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm. Soln. cont. 2% Triton X-100.	90E324
	D_2O/EtOH (95:5)	air[a]	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90E324
	MeOD	air[a]	0.2-0.3		PL/LI-56,42	S′ = HP; rel. to ϕ_Δ(S′) = 0.53; meas. ϕ_T(S) = 0.6; λ_{exc} = 347 nm. f_Δ^T = 0.4-0.5 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185
2.19	**3-Phorbinepropanoic acid, 9-acetyl-14-ethylidene-13,14-dihydro-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-, 3,7,11,15-tetramethyl-2-hexadecenyl ester (Bacteriopheophytin *b*)**						
	$(C_2H_5)_2O$	air[a]	0.43		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm. Used $P_T^{O_2}$ = 1.	90E324
	C_5H_5N	air[a]	0.50		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90E324
	CCl_4	O_2	0.75		MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85F517
	D_2O (mic)	air[a]	0.35		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm. Soln. cont. 2% Triton X-100.	90E324
	D_2O/EtOH (95:5)	air[a]	<0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90E324
2.20	**3-Phorbinepropanoic acid, 3,4-didehydro-9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-, magnesium(II) (Protochlorophyllide)**						
	$(C_2H_5)_2O$	air[a]	0.77		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70.	88F450
	D_2O	air[a]	≤0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Colloidal soln. contg. 0.5% NH_4OH.	88F450
	D_2O (mic)	air[a]	0.84		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Soln. cont. 1% Triton X-100.	88F450
2.21	**3-Phorbinepropanoic acid, 3,4-didehydro-9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-, 3,7,11,15-tetramethyl-2-hexadecenyl ester (Protopheophytin)**						
	$C_6H_5CH_3$	air[a]	0.70		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543
	CCl_4	air	0.88		MP/LI-56	S′ = Chl a; rel. to ϕ_Δ(S′) = 0.55. $P_T^{O_2}$ = 1.	79A010
	CH_3CN	air[a]	0.87		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543
2.22	**3-Phorbinepropanoic acid, 9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,6,13,18-tetramethyl-20-oxo- (Pheophorbide a)**						
	$(C_2H_5)_2O$	air	0.74		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70. $P_T^{O_2}$ = 1.	90R045
	CCl_4	air	0.71* 0.80		MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70. $P_T^{O_2}$ = 1.	90R045
	D_2O/EtOH (90:10) (mic)	air	0.70		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. $P_T^{O_2}$ = 1. Soln. cont. 2% Triton X-100.	90R045
	D_2O/EtOH (95:5) (mic)	air	0.49		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. $P_T^{O_2}$ = 1. Soln. cont. 2% Triton X-100.	90R045

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.22	**3-Phorbinepropanoic acid, 9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,6,13,18-tetramethyl-20-oxo- (Pheophorbide a)**—Continued						
	D_2O/EtOH (95:5)	air	<0.02		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045
	EtOH	air	0.60		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$. $P_T^{O_2} = 1$.	90R045
	EtOH	air[a]	0.51		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 514.5$ nm.	90R204
2.23	**3-Phorbinepropanoic acid, [3,7,11,15-tetramethyl-2-hexadecenyl 3,4-didehydro-9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoatomagnesium (Protochlorophyll)**						
	$(C_2H_5)_2O$	air[a]	0.84		PL/LI-56	S' = TPP; rel. to $\phi_\Delta(S') = 0.70$.	88F450
	$C_6H_5CH_3$	air[a]	0.68		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	CCl_4	air	0.63		MP/LI-56	S' = Chl a; rel. to $\phi_\Delta(S') = 0.55$. $P_T^{O_2} = 1$.	79A010
	CH_3CN	air[a]	0.78		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
	D_2O	air[a]	≤0.02		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$. Colloidal soln. contg. 0.5% NH_4OH.	88F450
	D_2O (mic)	air[a]	0.84		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$. *Soln. cont. 1% Triton X-100.*	88F450
2.24	**Phthalocyanine, magnesium(II)**						
	C_5H_5N	O_2	0.40		CP/Oc-14	A = H_2NCSNH_2; $\lambda_{exc} = 669$ nm. Assumed $f_r^A = 2$.	737347 74E522
2.25	**Phthalocyanine, zinc(II), bis(pyridine)**						
	C_6H_6	O_2	0.50		PL/LI-56	S' = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; $\lambda_{exc} = 600$ nm. $P_T^{O_2} = 0.95$.	89N079 90N126
	D_2O (ves) pD = 7.4	O_2	0.49		PL/LI-56	S' = UP; rel. to $\phi_\Delta(S') = 0.71$; $\lambda_{exc} = 600$ nm. [DPPC] = 6.7×10^{-4} mol L^{-1}, *S' in D_2O-Tris buffer.*	90N126
	D_2O (ves) pD = 7.4	O_2	0.47		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.72$; $\lambda_{exc} = 600$ nm. [DPPC] = 6.7×10^{-4} mol L^{-1}, S' in D_2O-Tris buffer.	90N126
	EtOH	air	0.53		CP/Ac-14	A = DPBF; $\lambda_{exc} = 600$ nm. Extrapolated to $[A] \to \infty$.	88A284
	EtOH	air	0.4		PL/LI-56	S' = An; rel. to $\phi_\Delta(S') = 0.53$; $\lambda_{exc} = 354$ nm.	88A284
	EtOH	air	0.4		PL/LI-56	S' = ZnTPP; rel. to $\phi_\Delta(S') = 0.55$; $\lambda_{exc} = 600$ nm.	88A284
	H_2O (ves)	air	0.7		CP/Ac-14	A = DPBF; $\lambda_{exc} = 600$ nm. Extrapolated to $[A] \to \infty$; unilamellar DPPC vesicles.	88A284
2.26	**Phthalocyanine, 1,4,8,11,15,18,22,25-octabutoxy-, zinc(II)**						
	C_6D_6	air	0.45		PL/LI-56	S' = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.46$; $\lambda_{exc} = 532$ nm. Soln. cont. 1% pyridine.	89E453
	C_6D_6	air	0.50		PL/LI-56	S' = BP; rel. to $\phi_\Delta(S') = 0.29$; meas. $\phi_T(S) = 0.52$; $\lambda_{exc} = 532$ nm. *Soln. cont. 0.01% morpholine.*	89E453
2.27	**Phthalocyanine, sulfo- (mixed di-, tri- and tetrasulfo)**						
	D_2O (mic)	air[a]	0.1		PL/LI-56,42	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.67$; meas. $\phi_T(S) = 0.25$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.4$ assuming $P_S^{O_2} = 0$. Soln. cont. 0.01 mol L^{-1} CTAB.	86F541 87R188
	H_2O pH = 7	air	0.14		CP/Pa-43	S' = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
	H_2O/MeOH (1:1) pH = 7	O_2	0.12		CP/Pa-14	A = TrpH; $\lambda_{exc} = 688$ nm.	87F104
	H_2O/MeOH (1:1) pH = 7	O_2	0.10		CP/Pa-14	A = TrpH; $\lambda_{exc} = 654$ nm.	87F104
	MeOD	air[a]	0.21* 0.17		PL/LI-56,42	S' = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.22$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.93$ *assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S')$ =* 0.64 from [88Z155].	87R185 87R188
	MeOD	air[a]	0.1		PL/LI-56,42	S' = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.22$; $\lambda_{exc} = 694$ nm. $f_\Delta^T = 0.6$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$.	87R185

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.28	**Phthalocyanine, trisulfo-, chloroaluminum(III)**						
	D_2O pH = 7	O_2	0.34		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.62$; meas. $\phi_T(S) = 0.46$; $\lambda_{exc} = 355$ nm. Rel. to S′ in H_2O; soln. contg. 2×10^{-3} mol L^{-1} phosphate buffer and 1% NaCl wt/wt.; $P_T^{O_2} = 1$.	90A022 89R092
2.29	**Phthalocyanine, sulfo-, chloroaluminum(III)**						
	H_2O pH = 7	air	0.34		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
2.30	**Phthalocyanine, sulfo-, aluminum(III)**						
	MeOD	air[a]	0.36		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.42$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.86$ assuming $P_S^{O_2} = 0$.	91R242 87R188
2.31	**Phthalocyanine, sulfo(phthalimido)-, aluminum(III)**						
	MeOD	air[a]	0.36		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; $\lambda_{exc} = 347$ nm.	91R242
2.32	**Phthalocyanine, sulfo-, cobalt(II)**						
	H_2O pH = 7	air	0		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
2.33	**Phthalocyanine, sulfo-, copper(II)**						
	H_2O pH = 7	air	0		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
	H_2O/MeOH (1:1) pH = 7	O_2	0.12		CP/Pa-14	A = TrpH; $\lambda_{exc} = 668$ nm.	87F104
2.34	**Phthalocyanine, sulfo-, iron(II)**						
	H_2O pH = 7	air	0		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
2.35	**Phthalocyanine, tetrasulfo-, chlorogallium(III)**						
	H_2O/MeOH (1:1) pH = 7	O_2	0.47		CP/Pa-14	A = TrpH; $\lambda_{exc} = 680$ nm.	87F104
2.36	**Phthalocyanine, sulfo-, chlorogallium(III)**						
	H_2O/MeOH (1:1) pH = 7	O_2	0.56		CP/Pa-14	A = TrpH; $\lambda_{exc} = 680$ nm.	87F104
2.37	**Phthalocyanine, sulfo-, oxovanadium(IV)**						
	H_2O pH = 7	air	0		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
2.38	**Phthalocyanine, trisulfo-, zinc(II)**						
	D_2O pH = 7	O_2	0.36		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.62$; meas. $\phi_T(S) = 0.51$; $\lambda_{exc} = 355$ nm. Rel. to S′ in H_2O; soln. contg. 2×10^{-3} mol L^{-1} phosphate buffer and 1% NaCl wt/wt.; $P_T^{O_2} = 1$.	90A022
2.39	**Phthalocyanine, sulfo-, zinc(II)**						
	H_2O pH = 7	air	0.45		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
	H_2O/MeOH (1:1) pH = 7	O_2	0.62		CP/Pa-14	A = TrpH; $\lambda_{exc} = 669$ nm.	87F104
	MeOD	air[a]	0.43* 0.36		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.56$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.78$ assuming $P_S^{O_2} = 0$. $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	87R188 87R185

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.39	**Phthalocyanine, sulfo-, zinc(II)**—Continued						
	MeOD	air[a]	0.50* 0.41		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.56$; $\lambda_{exc} = 694$ nm. $f_\Delta^T = 0.88$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	87R185
	MeOD	air[a]	0.38* 0.32		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.56$; $\lambda_{exc} = 650$ nm. $f_\Delta^T = 0.69$ assuming $P_S^{O_2} = 0$; used $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	86F541
2.40	**Phthalocyanine, tetracarboxy-, copper(II)**						
	DMSO	O_2	0.16		CP/Ac-15	A = DPBF. Independent of $[S] = (2\text{-}26) \times 10^{-6}$ mol L^{-1}; dimers and oligomers may be present.	89F260
2.41	**Phthalocyanine, 2,9,16,23-tetrakis(1,1-dimethylethyl)-**						
	CCl_4	air	0.15* 0.17		MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$.	90F095
	CCl_4	air[a]	0.14* 0.16		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.42	**Phthalocyanine, 2,9,16,23-tetrakis(1,1-dimethylethyl)-, chloroaluminum(III)**						
	CCl_4	air[a]	0.28* 0.31		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.43	**Phthalocyanine, 2,9,16,23-tetrakis(1,1-dimethylethyl)-, copper(II)**						
	CCl_4	air[a]	0.12* 0.13		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.44	**Phthalocyanine, [2,9,16,23-tetrakis(1,1-dimethylethyl)]-, magnesium(II)**						
	CCl_4	air[a]	0.06* 0.07		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 652$ nm.	90R204
2.45	**Phthalocyanine, tetrakis[methylenethio[(dimethyamino)methylidyne]]tetrakis[*N*-methylmethanaminiumato]-, copper(II), tetrachloride**						
	H_2O pH = 7	air	0		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 670$ nm. RNO as monitor of P; used $P_T^{O_2} = 1$, $\phi_\Delta(S')$ at $\lambda_{exc} = 550$ nm, cor. to 670 nm.	86R060
2.46	**Porphine**						
	$C_6H_5CH_3$	air[a]	0.67		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
	CCl_4	air	0.75		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$. $P_T^{O_2} = 1$.	82F161
2.47	**Porphine-21,23-d_2**						
	$C_6H_5CH_3$	air[a]	0.70		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.48	**Porphine, 5-amino-2,7,12,17-tetraethyl-3,8,13,18-tetramethyl- (5-Aminoetioporphyrin I)**						
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.49	**Porphine, 2,18-bis[3-(dimethylammonio)propyl]-7,12-diethyl-3,8,13,17-tetramethyl-, dimethanesulfonate**						
	D_2O/EtOH (7:3)	air[a]	0.49		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 337$ nm. Rel. to TPP in CCl_4.	86F316
2.50	**Porphine, 2,18-bis[3-(dimethylammonio)propyl]-7,12-diethyl-3,8,13,17-tetramethyl-, dimethanesulfonate, cobalt(II)**						
	D_2O/EtOH (7:3)	air[a]	≤0.02		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 337$ nm. Rel. to TPP in CCl_4.	86F316
2.51	**Porphine, 2,18-bis[3-(dimethylammonio)propyl]-7,12-diethyl-3,8,13,17-tetramethyl-, dimethanesulfonate, manganese(II)**						
	D_2O/EtOH (7:3)	air[a]	≤0.02		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 337$ nm. Rel. to TPP in CCl_4.	86F316
2.52	**Porphine, 2,18-bis[3-(dimethylammonio)propyl]-7,12-diethyl-3,8,13,17-tetramethyl-, dimethanesulfonate, zinc(II)**						
	D_2O/EtOH (7:3)	air[a]	0.24		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 337$ nm. Rel. to TPP in CCl_4.	86F316

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.53	**Porphine, 21,23-dideutero-2,3-dihydro-5,10,15,20-tetraphenyl- (Tetraphenylchlorin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.70		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.54	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl- (Octaethylporphyrin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.55	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl-2,3-dihydro- (Octaethylchlorin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.60		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.56	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl-5-methyl- (α-Methyloctaethylporphyrin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.81		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.57	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl-21-methyl- (*N*-Methyloctaethylporphyrin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.55		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.58	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl-5-phenyl- (α-Phenyloctaethylporphyrin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.60		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.59	**Porphine, 21,23-dideutero-2,3,7,8,12,13,17,18-octamethyl-5,10,15,20-tetraphenyl-**						
	$C_6H_5CH_3$	air[a]	0.67		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.60	**Porphine, 21,23-dideutero-2,3,12,13-tetraethyl-**						
	$C_6H_5CH_3$	air[a]	0.72		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.61	**Porphine, 21,23-dideutero-2,7,12,17-tetraethyl-3,8,13,18-tetramethyl- (Etioporphyrin-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.62	**Porphine, 21,23-dideutero-5,10,15,20-tetrakis(2-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.84		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.63	**Porphine, 21,23-dideutero-5,10,15,20-tetrakis(3-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.89		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.64	**Porphine, 21,23-dideutero-5,10,15,20-tetrakis(4-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.83		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.65	**Porphine, 21,23-dideutero-5,10,15,20-tetraphenyl- (TPP-*d*$_2$)**						
	$C_6H_5CH_3$	air[a]	0.86		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.66	**Porphine, 21,23-dideutero-5,10,15,20-tetrapropyl-**						
	$C_6H_5CH_3$	air[a]	0.92		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.67	**Porphine, 2,3-dihydro-5,10,15,20-tetraphenyl- (Tetraphenylchlorin, TPC)**						
	$C_6H_5CH_3$	air[a]	0.65		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
	CCl_4	air	0.55		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.68	**Porphine, ethanediylbis[5,5′-(2,3,7,8,12,13,17,18-octaethyl-**						
	$C_6H_5CH_3$	air[a]	0.80		PL/LI-56	S′ = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.80$; $\lambda_{exc} = 347$ nm.	91E392
2.69	**Porphine, ethanediylbis[5,5′-(2,3,7,8,12,13,17,18-octaethyl-, copper(II)**						
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	S′ = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.86$; $\lambda_{exc} = 347$ nm.	91E392
2.70	**Porphine, ethanediylbis[5,5′-(2,3,7,8,12,13,17,18-octaethyl-, copper(II)zinc(II)**						
	$C_6H_5CH_3$	air[a]	0.35		PL/LI-56	S′ = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.36$; $\lambda_{exc} = 347$ nm.	91E392

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.71	**Porphine, ethanediylbis[5,5'-(2,3,7,8,12,13,17,18-octaethyl-, biszinc(II)**						
	$C_6H_5CH_3$	air[a]	0.88		PL/LI-56	S' = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 347$ nm.	91E392
2.72	**Porphine, ethanediylbis[5,5'-(2,3,7,8,12,13,17,18-octapropyl-, biscopper(II)**						
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.09$; $\lambda_{exc} = 347$ nm.	91E392
2.73	**Porphine, 2,3,7,8,12,13,17,18-octaethyl- (Octaethylporphyrin, OEP)**						
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504 87E667
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S' = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.72$; $\lambda_{exc} = 347$ nm.	91E392
2.74	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, cadmium(II) (CdOEP)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.80		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.75	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, copper(II)**						
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 347$ nm.	91E392
2.76	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, lead(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.78		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.77	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, indium(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.76		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.78	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, oxotitanium(IV)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.80		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.79	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, oxovanadium(IV)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.84		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.80	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, palladium(II)**						
	$C_6H_5CH_3$	air[a]	1			Reference value, same as PdMPDME, see 2.73, 2.83.	
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.86$; $\lambda_{exc} = 347$ nm.	91E392
2.81	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, scandium(III)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.88		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.82	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, dichlorotin(IV)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.40		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
2.83	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-, zinc(II) (ZnOEP)**						
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504 87E667 87E543
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	S' = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.72$; $\lambda_{exc} = 347$ nm.	91E392
	CH_3CN	air[a]	0.75		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E543
2.84	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-2,3-dihydro-**						
	$C_6H_5CH_3$	air[a]	0.60		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.85	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-5-methyl-**						
	$C_6H_5CH_3$	air[a]	0.74		PL/LI-56	S' = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
	$C_6H_5CH_3$	air[a]	0.75		PL/LI-56	S' = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S' = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.77$; $\lambda_{exc} = 347$ nm.	91E392

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.86	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-5-methyl-, copper(II)**						
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.25$; $\lambda_{exc} = 347$ nm.	91E392
2.87	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-5-methyl-, zinc(II)**						
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	S′ = PdOEP; rel. to $\phi_\Delta(S') = 1$[b]; $\lambda_{exc} = 347$ nm.	91E392
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.78$; $\lambda_{exc} = 347$ nm.	91E392
2.88	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-21-methyl-**						
	$C_6H_5CH_3$	air[a]	0.55		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.89	**Porphine, 2,3,7,8,12,13,17,18-octaethyl-5-phenyl-**						
	$C_6H_5CH_3$	air[a]	0.54		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.90	**Porphine, 2,3,7,8,12,13,17,18-octamethyl-5,10,15,20-tetraphenyl-**						
	$C_6H_5CH_3$	air[a]	0.52		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.91	**Porphine, 2,3,7,8-tetraethyl-**						
	$C_6H_5CH_3$	air[a]	0.64		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.92	**Porphine, 2,3,12,13-tetraethyl-**						
	$C_6H_5CH_3$	air[a]	0.72		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.93	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl- (Etioporphyrin I)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.75		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E667 89A504
2.94	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-, zinc(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.80		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm.	87E667 89A504
2.95	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5,10-dinitro-**						
	$C_6H_5CH_3$	air[a]	0.33		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.96	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5,10-dinitro-, zinc(II)**						
	$C_6H_5CH_3$	air[a]	0.44		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.97	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5,15-dinitro-**						
	$C_6H_5CH_3$	air[a]	0.31		PL/LI-56	S′ = PdMPDME: rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.98	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5,15-dinitro-, zinc(II)**						
	$C_6H_5CH_3$	air[a]	0.34		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.99	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5-nitro-**						
	$C_6H_5CH_3$	air[a]	0.57		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.100	**Porphine, 2,7,12,17-tetraethyl-3,8,13,18-tetramethyl-5,10,15-trinitro-**						
	$C_6H_5CH_3$	air[a]	0.36		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.101	**Porphine, 7,8,17,18-tetrahydro-5,10,15,20-tetraphenyl-, (*E*) (Tetraphenylbacteriochlorin, TPBC)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.48		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667 89A504
	CCl_4	air	0.45		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.102	**Porphine, 5,10,15,20-tetrakis(4-bromophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.81		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.103	**Porphine, 5,10,15,20-tetrakis(4-carboxyphenyl)-**						
	H_2O pH = 7.4	air[a]		0.70	PL/LI,St-55,42	S′ = HP; rel. to $f_\Delta^T(S') = 0.51$; meas. $\phi_T(S) = 0.76$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) = 27{,}000$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.53$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$	86A407

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.103	**Porphine, 5,10,15,20-tetrakis(4-carboxyphenyl)—Continued**						
	H_2O pH = 7	air	0.58		CP/Pa-43	S′ = H_2TMpyP^{4+}; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 546$ nm. RNO as monitor of P.	84F253
	H_2O pH = 7	air	0.58		CP/Oc-43	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 436$ or 546 nm. A = Im or FFA.	84F253
	H_2O (mic)	air[a]		0.98	PL/LI,St-55,42	S′ = HP; rel. to $f_\Delta^T(S') = 0.67$; meas. $\phi_T(S) = 0.85$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) = 36{,}500$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.83$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; soln. cont. 2% Triton X-100.	86A407
2.104	**Porphine, 5,10,15,20-tetrakis(2-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.84		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.105	**Porphine, 5,10,15,20-tetrakis(3-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.81		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.106	**Porphine, 5,10,15,20-tetrakis(4-chlorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.71		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.107	**Porphine, 5,10,15,20-tetrakis(2,6-dichloro-3-sulfonatophenyl)-, zinc(II)**						
	H_2O pH = 7	O_2	0.74		PL/LI-56	S′ = H_2TPPS^{4-}: rel. to $\phi_\Delta(S') = 0.62$. $\phi_\Delta = 0.76$ for dye bound with human serum albumin.	90R041
2.108	**Porphine, 5,10,15,20-tetrakis(2-fluorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.71		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.109	**Porphine, 5,10,15,20-tetrakis(2-fluorophenyl)-, zinc(II)**						
	$C_6H_5CH_3$	air[a]	0.93		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.110	**Porphine, 5,10,15,20-tetrakis(4-fluorophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.65		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.111	**Porphine, 5,10,15,20-tetrakis(2-hydroxyphenyl)-**						
	MeOD	air	0.65* 0.54		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.68$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 1$ assuming $P_S^{O_2} = 0$. $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	88E519
2.112	**Porphine, 5,10,15,20-tetrakis(3-hydroxyphenyl)-**						
	EtOH	air[a]	0.50		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 514{,}5$ nm.	90R204
	MeOD	air	0.69* 0.57		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.69$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 1$ assuming $P_S^{O_2} = 0$. $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	88E519
2.113	**Porphine, 5,10,15,20-tetrakis(4-hydroxyphenyl)- (T(p-HOP)P)**						
	EtOH	air[a]	0.58		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 514.5$ nm.	90R204
	MeOD	air	0.70* 0.56		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.53$; meas. $\phi_T(S) = 0.65$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 1$ assuming $P_S^{O_2} = 0$. $P_T^{O_2} = 1$; recalcd. using $\phi_\Delta(S') = 0.64$ from [88Z155].	88E519
2.114	**Porphine, 5,10,15,20-tetrakis(4-iodophenyl)-**						
	$C_6H_5CH_3$	air[a]	0.97		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
2.115	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-2-yl)-**						
	H_2O pH = 7	air	0.68		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 436$ or 546 nm. A = Im or FFA, assumed $P_T^{O_2} = 1$.	86R162
2.116	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-3-yl)-**						
	H_2O pH = 7	air	0.77		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 436$ or 546 nm. A = Im or FFA, assumed $P_T^{O_2} = 1$.	86R162

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.117	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)- (H_2TMpyP^{4+})**						
	H_2O pH = 7	air	0.74		CP/Oc-14	A = FFA; λ_{exc} = 436 nm. $P_T^{O_2}$ = 1.	84F253
2.118	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, cadmium(II)**						
	H_2O pH = 7	air	0.75		CP/Oc-43	S′ = H_2TMpyP^{4+}; A = FFA; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm.	84F253
2.119	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, cobalt(II)**						
	H_2O pH = 7	air	<0.001		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
2.120	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, copper(II)**						
	H_2O pH = 7	air	<0.001		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
2.121	**Porphine, 5,10,15-20-tetrakis(1-methylpyridinium-4-yl)-, iron(II)**						
	H_2O pH = 7	air	<0.001		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA, assumed $P_T^{O_2}$ = 1.	86R162
2.122	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, lutetium(III)**						
	D_2O pD = 7	O_2	0.78		PL/LI-56	S′ = AlPCS; rel. to ϕ_Δ(S′) = 0.34.	91E452
2.123	**Porphine, 5,10,15-20-tetrakis(1-methylpyridinium-4-yl)-, magnesium(II)**						
	H_2O pH = 7	air	0.69		CP/Oc-43	S′ = H_2TMpyP^{4+}; A = FFA; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm.	84F253
2.124	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, manganese(III)**						
	H_2O pH = 7	air	<0.001		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
2.125	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, nickel(II)**						
	H_2O pH = 7	air	<0.001		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA, assumed $P_T^{O_2}$ = 1.	86R162
2.126	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, palladium(II)**						
	H_2O pH = 7	air	0.12		CP/Oc-43	S′ = H_2TMpyP^{4+}; A = FFA; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm. $P_T^{O_2} \neq 1$.	84F253
2.127	**Porphine, 5,10,15-20-tetrakis(1-methylpyridinium-4-yl)-, tin(IV)**						
	H_2O pH = 7	air	0.78		CP/Pa-43	S′ = H_2TMpyP^{4+}; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm. RNO as monitor of P.	84F253
2.128	**Porphine, 5,10,15,20-tetrakis(1-methylpyridinium-4-yl)-, zinc(II)**						
	H_2O pH = 7	air	0.88		CP/Oc-43	S′ = H_2TMpyP^{4+}; A = FFA; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm.	84F253
2.129	**Porphine, tetrakis(4-sulfonatophenyl)-**						
	D_2O pH = 7	O_2	0.64		PL/LI-56	meas. ϕ_T(S) = 0.79; λ_{exc} = 532 nm. Rel. to ϕ_Δ = 0.62 for H_2TPPS^{4-} in H_2O; soln. contg. 2×10^{-3} mol L^{-1} phosphate buffer and 1% NaCl wt/wt.: $P_T^{O_2}$ = 1.	90A022
	D_2O	2.45×10^{-4}	0.76		PL/LI-56	S′ = $PdTPPS^{4-}$; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E941
	D_2O	air[a]	0.42		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 337 nm. Rel. to TPP in CCl_4.	86F316
	H_2O pH = 7.4	O_2	0.71		CP/Oc-14	A = Im; λ_{exc} = 540 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.33		PL/Ac-14	A = TrpH; λ_{exc} = 630 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.48		CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.75; λ_{exc} = 540 nm. Soln. cont. 1.6% NaCl in phosphate buffer; RNO as monitor for P.	88N170
	H_2O pH = 7.4	O_2	0.50		CP/Ac-14	A = TrpH; λ_{exc} = 540 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.129	**Porphine, tetrakis(4-sulfonatophenyl)**—Continued						
	H_2O pH = 7.4	air[a]		1.3	PL/LI,St-55,42	S′ = HP; rel. to f_Δ^T(S′) = 0.51; meas. ϕ_T(S) = 0.57; λ_{exc} = 532 nm. $\Delta\varepsilon_T$(S) = 52,000 L mol^{-1} cm^{-1} at 440 nm; ϕ_Δ = 0.75 assuming $P_S^{O_2}$ = 0; $P_T^{O_2}$ = 1.	86A407
	H_2O pH = 7	air	0.62		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
	H_2O pH = 7	air	0.67		CP/Pa-43	S′ = H_2TMpyP^{4+}; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm. RNO as monitor of P.	84F253
	H_2O (mic)	air[a]		1.2	PL/LI,St-55,42	S′ = HP; rel. to f_Δ^T(S′) = 0.67; meas. ϕ_T(S) = 0.65; λ_{exc} = 532 nm. $\Delta\varepsilon_T$(S) = 57,000 L mol^{-1} cm^{-1} at 440 nm; ϕ_Δ = 0.80 assuming $P_S^{O_2}$ = 0; soln. cont. 2% Triton X-100.	86A407
2.130	**Porphine, 5,10,15,20-tetrakis(4-sulfonatophenyl)-, palladium(II)**						
	D_2O	2.45×10^{-4}	1.0			λ_{exc} = 347 nm. ϕ_T = 1; used as reference value.	87E941
2.131	**Porphine, 5,10,15,20-tetrakis(4-sulfonatophenyl)-, dichlorotin(IV)**						
	D_2O pH = 7	O_2	0.77		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.62; meas. ϕ_T(S) = 1.0; λ_{exc} = 532 nm. Rel. to for S′ in H_2O; soln. contg. 2×10^{-3} mol L^{-1} phosphate buffer and 1% NaCl wt/wt.; $P_T^{O_2}$ = 1.	90A022
	H_2O pH = 7	air	0.67		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA, assumed $P_T^{O_2}$ = 1.	86R162
2.132	**Porphine, 5,10,15,20-tetrakis(4-sulfonatophenyl)-, ytterbium(II)**						
	H_2O pH = 7.0	O_2	0.04		CP/Pa-43	S′ = RB; A = His; rel. to ϕ_Δ(S′) = 0.75. RNO as monitor of P.	89F580
2.133	**Porphine, 5,10,15,20-tetrakis(4-sulfonatophenyl)-, zinc(II)**						
	D_2O	2.45×10^{-4}	0.77		PL/LI-56	S′ = $PdTPPS^{4-}$; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E941
2.134	**Porphine, 5,10,15,20-tetrakis(4-trimethylammoniophenyl)-**						
	H_2O pH = 7.4	air[a]		0.85	PL/LI,St-55,42	S′ = HP; rel. to f_Δ^T(S′) = 0.51; meas. ϕ_T(S) = 0.56; λ_{exc} = 532 nm. $\Delta\varepsilon_T$(S) = 48,000 L mol^{-1} cm^{-1} at 440 nm; ϕ_Δ = 0.48 assuming $P_S^{O_2}$ = 0; $P_T^{O_2}$ = 1.	86A407
	H_2O pH = 7	air	0.77		CP/Oc or Pa-43	S′ = H_2TMpyP^{4+}; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
	H_2O pH = 7	air	0.69		CP/Pa-43	S′ = H_2TMpyP^{4+}; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.74; λ_{exc} = 546 nm. RNO as monitor of P.	84F253
	H_2O (mic)	air[a]		1.3	PL/LI,St-55,42	S′ = HP; rel. to f_Δ^T(S′) = 0.67; meas. ϕ_T(S) = 0.58; λ_{exc} = 532 nm. $\Delta\varepsilon_T$(S) = 53,000 L mol^{-1} cm^{-1} at 440 nm; ϕ_Δ = 0.73 assuming $P_S^{O_2}$ = 0; $P_T^{O_2}$ = 1; Soln. cont. 2% Triton X-100.	86A407
2.135	**Porphine, 3,7,12,18-tetramethyl-2,8-diethyl-**						
	$C_6H_5CH_3$	air[a]	0.67		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0.	89A504
2.136	**Porphine, 5,10,15,20-tetraphenyl- (TPP)**						
	C_5H_5N	O_2	0.74		CP/Oc-14	A = H_2NCSNH_2; λ_{exc} = 430 nm. Assumed f_r^A = 2.	737347 74E522
	n-C_3H_7I	air	0.77		CP/Ac-14	A = DPBF.	90E215
	c-C_4H_8O	air	0.62		CP/Ac-14	A = DPBF.	90E215
	c-C_6H_{12}	air	0.67		CP/Ac-14	A = DPBF.	90E215
	C_6D_5Br	air	0.69		CP/Ac-14	A = DPBF.	90E215
	C_6D_6	air	0.62		CP/Ac-14	A = DPBF.	90E215
	C_6F_5Br	air	0.66		CP/Ac-14	A = DPBF.	90E215
	C_6F_5Cl	air	0.57		CP/Ac-14	A = DPBF.	90E215
	C_6F_5I	air	0.75		CP/Ac-14	A = DPBF.	90E215
	C_6F_6	air	0.57		CP/Ac-14	A = DPBF.	90E215

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.136	**Porphine, 5,10,15,20-tetraphenyl- (TPP)**—Continued						
	$C_6H_5CH_3$	1.1×10^{-3}	0.69		PL/LI-56	S′ = PdTPP; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E941
	$C_6H_5CH_3$	1.8×10^{-3}	0.70		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667 89A504
	$C_6H_5CH_3$	8.5×10^{-3}	0.88		CP/Oc-43	S′ = MB$^+$; A = TME; rel. to $\phi_\Delta(S') = 0.50$. Rel. to S′ in MeOH.	84F191
	$C_6H_5CH_3$	O_2	0.88		CP/Tr,St-51	A = DPBF; $\lambda_{exc} = 546$ nm; used $\phi_F(S) = 0.05$. Measured ϕ_{ox} = 0.88 and $\Delta H_{ox} = -185$ kJ mol^{-1}.	80C002
	C_6H_5Br	air	0.69		CP/Ac-14	A = DPBF.	90E215
	C_6H_5Cl	air	0.61		CP/Ac-14	A = DPBF.	90E215
	C_6H_5F	air	0.60		CP/Ac-14	A = DPBF.	90E215
	C_6H_5I	air	0.70		CP/Ac-14	A = DPBF.	90E215
	C_6H_6	0.1×10^{-3}	0.41^T	0.71	PL/LI-56,38	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 532$ nm; used $\phi_T(S) = 0.63$. $P_T^{O_2} = 1$.	90A328
	C_6H_6	air	0.55	0.74	PL/LI-56,42	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$; used $\phi_T(S) = 0.63$. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$.	90A328
	C_6H_6	air	0.62		CP/Ac-14	A = DPBF. Ave. with value from [89E223].	90E215
	C_6H_6	air	0.67		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	C_6H_6	air	0.72* 0.63		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.67$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.92$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	88E519
	C_6H_6	air	0.58		PL/Hp-52	$\lambda_{exc} = 590$ nm.	85E591
	C_6H_6	9×10^{-3}	0.62		PL/LI-56	S′ = Pz; rel. to $\phi_\Delta(S') = 0.83$.	90A328
	C_6H_6	9.1×10^{-3}	0.89		CP/Oc-43	S′ = MB$^+$; A = TME; rel. to $\phi_\Delta(S') = 0.50$. Rel. to S′ in MeOH.	84F191
	CCl_4	air	0.62			See Table 4.	
	CCl_4	air	0.54		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CCl_4	air	0.65		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$. $P_T^{O_2} = 1$.	82F161
	CCl_4	air	0.7		MP/LI-56	S′ not given, probably Chl a, $\phi_\Delta = 0.55$.	81E631
	CCl_4	O_2	0.88		CP/Tr-51	$\lambda_{exc} = 546$ nm. A = DPBF, 2,5-DMF and TME; measured ϕ_F, ϕ_{ox} = 0.88 and $\Delta H_{ox} = -205$, -95, and -175 kJ mol^{-1} for DPBF, 2,5-DMF and TME, resp.; $P_T^{O_2} = 1$.	80C002
	CH_3CN	air	0.60		CP/Ac-14	A = DPBF. Ave. with value from [89E223].	90E215
	CH_3CN	air	0.50		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$CHCl_3$	air	0.55		CP/Ac-14	A = DPBF. Ave. with value from [89E223].	90E215
	$CHCl_3$	air	0.50		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	CS_2	air	0.51		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$ClCF_2CCl_2F$	air	0.41		CP/Ac-14	A = MDH. $f_r^A = 0.30$.	89E223
	$ClCF_2CCl_2F$	O_2	~1		CP/Tr-51	A = DPBF; $\lambda_{exc} = 404$ nm. Measured $\phi_F(S) = 0.03$, $\phi_{ox} = 1.0$ and $\Delta H_{ox} = -195$ kJ mol^{-1}; $P_T^{O_2} = 1$	80C002
	2-EtNp	air	0.63		CP/Ac-14	A = DPBF.	90E215
	1-MeNp	air	0.34		CP/Ac-14	A = DPBF.	90E215
2.137	**Porphine, tetraphenyl-, cadmium(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.96		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E667
	$C_6H_5CH_3$	1.1×10^{-3}	0.98		PL/LI-56	S′ = PdTPP; rel. to $\phi_\Delta(S') = 1.0$; $\lambda_{exc} = 347$ nm.	87E941
2.138	**Porphine, 5,10,15,20-tetraphenyl-, chloroaluminum(III)**						
	CCl_4	air	0.90		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.139	**Porphine, 5,10,15,20-tetraphenyl-, cobalt(II)**						
	CCl_4	air	<0.01		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.140	**Porphine, 5,10,15,20-tetraphenyl-, copper(II)**						
	CCl_4	air	<0.01		MP/LI-56	S′ = Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.141	**Porphine, 5,10,15,20-tetraphenyl-, dichlorotin(IV)**						
	CCl_4	air	0.55		MP/LI-56	$S' = $ Ph a; rel. to $\phi_\Delta(S') = 0.8$	82F161
2.142	**Porphine, 5,10,15,20-tetraphenyl-, gallium(II)**						
	$C_6H_5CH_3$	air[a]	0.85		PL/LI-56	$S' = $ PdOEP; rel. to $\phi_\Delta(S') = 1^b$; $\lambda_{exc} = 347$ nm.	91E392
2.143	**Porphine, 5,10,15,20-tetraphenyl-, iron(III)**						
	CCl_4	air	<0.01		MP/LI-56	$S' = $ Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.144	**Porphine, 5,10,15,20-tetraphenyl-, manganese(III)**						
	CCl_4	air	<0.01		MP/LI-56	$S' = $ Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.145	**Porphine, 5,10,15,20-tetraphenyl-, nickel(II)**						
	CCl_4	air	<0.01		MP/LI-56	$S' = $ Ph a; rel. to $\phi_\Delta(S') = 0.8$.	82F161
2.146	**Porphine, 5,10,15,20-tetraphenyl-, zinc(II) (ZnTPP)**						
	C_5H_5N	O_2	0.79		CP/Oc-14	$A = H_2NCSNH_2$; $\lambda_{exc} = 405$ nm. Assumed $f_r^A = 2$.	73Z347 74E522
	$C_6H_5CH_3$	air[a]	0.92		PL/LI-56	$S' = $ PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504 87E667
	$C_6H_5CH_3$	1.1×10^{-3}	0.93		PL/LI-56	$S' = $ PdTPP; rel. to $\phi_\Delta(S') = 1.0$.	87E941
	C_6H_6	0.1×10^{-3}	0.57^T	0.65	PL/LI-56,42	$S' = $ Pz; rel. to $\phi_\Delta(S') = 0.83$; $\lambda_{exc} = 532$ nm; used $\phi_T(S) = 0.87$. $P_T^{O_2} = 1$.	90A328
	C_6H_6	air		0.78	PL/LI-56,38	$S' = $ Pz; rel. to $f_\Delta^T(S') = 1.0$; $\lambda_{exc} = 532$ nm. $P_T^{O_2} = 1$.	90A328
	C_6H_6	air	0.68		PL/LI-56	$S' = $ Pz; rel. to $\phi_\Delta(S') = 0.83$. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$.	90A328
	C_6H_6	air	0.73		PL/Hp-52	$\lambda_{exc} = 560$ nm.	85E591
	C_6H_6	O_2	0.75		PL/LI-56	$S' = $ Pz; rel. to $\phi_\Delta(S') = 0.83$. $P_T^{O_2} = 1$; assumed $f_T^{O_2} = 1$.	90A328
	CCl_4	air	0.50		MP/LI-56	$S' = $ Ph a; rel. to $\phi_\Delta(S') = 0.8$. $P_T^{O_2} = 1$.	82F161
2.147	**Porphine, 5,10,15,20-tetrapropyl-**						
	$C_6H_5CH_3$	air[a]	0.74		PL/LI-56	$S' = $ PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.148	**Porphine, 5,10,15-tris(4-*N*-methylpyridyl)-20-[2-[*N*-[20-[5,10,15-tris(4-*N*-methylpyridylporphinyl]-3-phenoxypropyl]-4-carboxamidobutyl]phenyl-**						
	H_2O pH = 7	air	0.69		CP/Oc or Pa-43	$S' = H_2TMpyP^{4+}$; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 436$ or 546 nm. A = Im or FFA, assumed $P_T^{O_2} = 1$.	86R162
2.149	**Porphine-5-carboxaldehyde, 21,23-dideutero-2,3,7,8,12,13,17,18-octaethyl-**						
	$C_6H_5CH_3$	air[a]	0.63		PL/LI-56	$S' = $ PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.150	**Porphine-5-carboxaldehyde, 2,3,7,8,12,13,17,18-octaethyl-**						
	$C_6H_5CH_3$	air[a]	0.63		PL/LI-56	$S' = $ PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615 89A504
2.151	**Porphine-2,20-dicarboxylic acid, 18-(20-carboxyethyl)-12-ethenyl-7-ethyl-17,18-dihydro-3,8,13,17-tetramethyl-, cyclic 2,20-anhydride**						
	$(C_2H_5)_2O$	4×10^{-3}	0.83		PL/LI-56	$S' = $ PdMPDME; rel. to $\phi_\Delta(S') = 1$.	90E401
2.152	**Porphine-2,18-dipropanoic acid, 7,12-bis[1-[(2-amino-2-carboxyethyl)thio]ethyl]-3,8,13,17-tetramethyl- (Porphyrin c)**						
	H_2O pH = 7.5	O_2	0.40		CP/Oc-43	$S' = $ RB; A = FFA; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 360, 400$ nm.	89F093
	H_2O pH = 7.5	O_2	0.59		CP/Oc-43	$S' = $ RB; A = FFA; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 555, 580$ nm. Meas. $\phi_\Delta = 0.33$ for porphyrin c aggregate.	89F093
2.153	**Porphine-2,18-dipropanoic acid, 7,12-bis[1-[(2-amino-2-carboxyethyl)thio]ethyl]-3,8,13,17-tetramethyl-, zinc(II)**						
	H_2O pH = 7.5	O_2	0.29		CP/Oc-43	$S' = $ RB; A = FFA; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 400, 575$ nm.	89F093

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.154	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl- (Hematoporphyrin, HP)**						
	D_2O	air[a]	0.28		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	D_2O (mic)	air[a]	0.77		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. contg. 2% Triton X-100.	89E729
	D_2O (mic)	air[a]	0.35		PL/LI-56,42	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.67$; meas. $\phi_T(S) = 0.71$; $\lambda_{exc} =$ 347 nm. $f_\Delta^T = 0.49$ assuming $P_S^{O_2} = 0$. Soln. cont. 10^{-2} mol L^{-1} CTAB.	87R188
	D_2O (mic)	O_2			PL/LI-56,42	$S' =$ HP; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 2.3$; $\lambda_{exc} = 355$ nm; used $\phi_T(S) =$ 0.90. Calculated $f_\Delta^T(S)/f_\Delta^T(S') = 2.43$. Soln. cont. 0.01 mol L^{-1} CTAB; rel. to HP in D_2O.	86E061
	D_2O (mic)	air[a]	0.35		PL/LI-56,42	$S' = H_2TPPS^{4-}$; meas. $\phi_T(S) = 0.94$; $\lambda_{exc} = 347$ nm. $f_\Delta^T = 0.37$ assuming $P_S^{O_2} = 0$. Soln. cont. CTAB micelles.	86F541
	D_2O (mic) pD = 7.4	O_2	0.22	0.32	PL/Ad-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.70$; $\lambda_{exc} = 532$ nm; used $k_A =$ 1×10^9 L mol^{-1} s^{-1}. $\Delta\varepsilon_T(S) = 9{,}770$ L mol^{-1} cm^{-1} at 460 nm; soln. cont. 0.01 mol L^{-1} CTAB; value questioned in [84F327].	83E667
	D_2O (mic) pD = 7.4	O_2	0.27	0.32	PL/Ad-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.87$; $\lambda_{exc} = 532$ nm; used $k_A =$ 1×10^9 L mol^{-1} s^{-1}. $\Delta\varepsilon_T(S) = 6{,}660$ L mol^{-1} cm^{-1} at 460 nm; soln. cont. 0.07 mol L^{-1} SDS.	83E667
	D_2O/EtOH (7:3)	air[a]	0.21		PL/LI-56	$S' =$ TPP; rel. to $\phi_\Delta(S') = 0.7$; $\lambda_{exc} = 337$ nm. Rel. to TPP in CCl_4.	86F316
	EtOH	air[a]	0.60		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 514.5$ nm.	90R204
	EtOH	air[a]	0.67		PL/LI-56	$S' = H_2TPPS^{4-}$; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	EtOH	air	0.53		PL/Hp-52,42	meas. $\phi_T(S) = 0.71$; $\lambda_{exc} = 354$ nm. $f_\Delta^T = 0.75$ assuming $P_S^{O_2} = 0$.	87E054
	EtOH-d_1	O_2	0.53		PL/Hp-52	$\lambda_{exc} = 354$ nm.	88Z155
	EtOH-d_6	O_2	0.53		PL/Hp-52	$\lambda_{exc} = 354$ nm.	88Z155
	H_2O pH = 7.0	O_2	0.48		CP/Pa-43	$S' =$ RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
	H_2O pH = 7.4	O_2	0.08		CP/Pa-43	$S' =$ RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') =$ 0.75; $\lambda_{exc} = 540$ nm. Soln. cont. 1.6% NaCl in phosphate buffer; RNO as monitor for P.	88N170
	H_2O pH = 7.4	O_2	0.37		CP/Oc-14	A = Im; $\lambda_{exc} = 540$ nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.04		PL/Ac-14	A = TrpH; $\lambda_{exc} = 630$ nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.16		CP/Ac-14	A = TrpH; $\lambda_{exc} = 540$ nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	air[a]		0.51	PL/LI,St-55,42	meas. $\phi_T(S) = 0.63$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) = 4200$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.32$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; rel. to $f_\Delta^T = 0.67$ for HP in micellar soln.	86A407
	H_2O pH = 7.4	O_2	0.45		CP/Ac-43	$S' =$ RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') =$ 0.75; $\lambda_{exc} = 546$ nm. RNO as monitor of P; $\phi_\Delta = 0.36$ to 0.47 at [S] = (18-160) $\times 10^{-6}$, 0.35 at pH 7.0 at [S] = 3.0×10^{-5} mol L^{-1}.	85R008
	H_2O pH = 7.4	O_2	0.41	0.65	PL/Ad-49,39	A = DPBF; AC = S; $\lambda_{exc} = 532$ nm; used $k_A = 1 \times 10^9$ L mol^{-1} s^{-1}, $\phi_T(S) = 0.63$, $\varepsilon_T(AC) = 4200$ L mol^{-1} cm^{-1} at 460 nm. $\Delta\varepsilon_T(S) =$ 4,200 L mol^{-1} cm^{-1} at 460 nm; authors suggest this supersedes $f_\Delta^T = 0.32$ determined in [83E667].	84F327
	H_2O pH = 7	air	0.22		CP/Oc-43	$S' = H_2TMpyP^{4+}$; A = FFA; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 546$ nm.	84F253
	H_2O pH = 9	air	0.44		CP/Oc-43	$S' = H_2TMpyP^{4+}$; A = FFA; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 436$ nm.	84F253
	H_2O pH = 7	air	0.20		CP/Pa-43	$S' = H_2TMpyP^{4+}$; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 546$ nm. RNO as monitor of P.	84F253
	H_2O (mic)	air[a]	0.53	0.67	PL/Ad-49,39	A = DPBF; AC = S; meas. $\phi_T(S) = 0.78$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) =$ 9,200 L mol^{-1} cm^{-1} at 460 nm; $P_T^{O_2} = 1$; Soln. cont. 2% Triton X-100.	86A407

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.154	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl- (Hematoporphyrin, HP)**—Continued						
	H_2O (mic) pH = 7.4	O_2	0.77		CP/Ac-43	S′ = RB: A = Im: P = Imidazole endoperoxide: rel. to $\phi_\Delta(S')$ = 0.75; λ_{exc} = 546 nm. Soln. cont. 0.23 mg/mL egg phosphatidylcholine; RNO as monitor of P.	85R008
	$HCONH_2/D_2O$ (9:1)	O_2	0.43	0.60	PL/Ad-49,39	A = DPBF; AC = S; meas. $\phi_T(S)$ = 0.72; λ_{exc} = 532 nm; used k_A = 1.1×10^9 L mol^{-1} s^{-1}. $\Delta\varepsilon_T(S)$ = 10,200 L mol^{-1} cm^{-1} at 460 nm.	83E667
	MeOD	O_2	*0.64*		*PL/Hp-52*	*λ_{exc} = 354 nm.*	*88Z155*
	MeOH	air[a]	0.52		PL/LI-56	S′ = Ery; rel. to $\phi_\Delta(S')$ = 0.60.	87R138
	$MeOH/D_2O$ (9:1)	O_2	0.65	0.78	PL/Ad-49,39	A = DPBF; AC = S; meas. $\phi_T(S)$ = 0.83; λ_{exc} = 532 nm; used k_A = 1×10^9 L mol^{-1} s^{-1}. $\Delta\varepsilon_T(S)$ = 10,400 L mol^{-1} cm^{-1} at 460 nm; $P_T^{O_2}$ = 1.	83E667
2.155	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, cobalt(III)**						
	H_2O pH = 7	air	<0.001		CP/Oc-43	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S')$ = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
2.156	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, copper(II)**						
	H_2O pH = 8.0	air	0		CP/Pa-43	S′ = HP; A = 2,2,6,6-Tetramethyl-4-piperidone; P = 2,2,6,6-Tetramethyl-4-piperidone *N*-oxyl. P monitored by esr.	83N270
	H_2O pH = 8.0	air	0		CP/Pa-43	S′ = HP; A = Im; P = Imidazole endoperoxide. Tris-buffer, RNO as monitor of P.	83N270
2.157	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, diacetate (Hematoporphyrin diacetate)**						
	H_2O pH = 7.0	O_2	0.56		CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S')$ = 0.75. RNO as monitor of P.	89F580
2.158	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, dimethyl ester (HPDME)**						
	C_6D_6	1.2% O_2 in N_2		0.76	PR/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S')$ = 0.55. $P_T^{O_2}$ = 1; cor. for energy transfer efficiency.	91A358
	C_6H_6	O_2	0.57* 0.50		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S')$ = 0.73; meas. $\phi_T(S)$ = 0.72; λ_{exc} = 355 nm. f_Δ^T = 0.70 assuming $P_S^{O_2}$ = 0.	86E061
2.159	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, manganese(III)**						
	H_2O pH = 7	air	<0.001		CP/Oc-43	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S')$ = 0.74; λ_{exc} = 436 or 546 nm. A = Im or FFA.	84F253
2.160	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, nickel(II)**						
	DMF	O_2	0.02		CP/Pa-43	S′ = HP; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S')$ = 0.6[b]. Obs. P by esr	91F203
	DMF	O_2	0.02		CP/Ac-43	S′ = HP; A = Pd(phen)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b]. Obs. P by esr	91F203
	DMF	O_2	0.02		CP/Ac-43	S′ = HP; A = Pd(bpy)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b].	91F203
2.161	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, palladium(II)**						
	DMF	O_2	0.39		CP/Pa-43	S′ = HP; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S')$ = 0.6[b]. Obs. P by esr	91F203
	DMF	O_2	0.36		CP/Ac-43	S′ = HP; A = Pd(phen)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b].	91F203
	DMF	O_2	0.38		CP/Ac-43	S′ = HP; A = Pd(bpy)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b].	91F203
2.162	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-hydroxyethyl)-3,8,13,17-tetramethyl-, platinum(II)**						
	DMF	O_2	0.26		CP/Pa-43	S′ = HP; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S')$ = 0.6[b]. Obs. P by esr	91F203
	DMF	O_2	0.25		CP/Ac-43	S′ = HP; A = Pd(phen)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b].	91F203
	DMF	O_2	0.24		CP/Ac-43	S′ = HP; A = Pd(bpy)(dmt); rel. to $\phi_\Delta(S')$ = 0.6[b].	91F203
2.163	**Porphine-2,18-dipropanoic acid, 7,12-bis(2-hydroxyethyl)-3,8,13,17-tetramethyl- (Isohematoporphyrin)**						
	CH_2Cl_2	air[a]	0.66		CP/Pa-43	S′ = [22]Coproporphyrin II; A = 2,5-DMF. Rel. to $\phi_\Delta(S')$ = 1.1, using ϕ_Δ(RB) = 0.80[b].	90R215

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.164	**Porphine-2,18-dipropanoic acid, 7,12-bis(1-methoxyethyl)-3,7,12,17-tetramethyl-, dianion**						
	D_2O/EtOH (7:3)	air[a]	0.49		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 337 nm. Rel. to TPP in CCl_4.	86F316
2.165	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl- (Protoporphyrin, PP)**						
	D_2O	air[a]	≤0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Colloidal soln. contg. 0.5% NH_4OH.	88F450
	D_2O (mic)	air[a]	0.56		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Soln. cont. 1% Triton X-100.	88F450
	H_2O pH = 8.0	air	0.14		CP/Pa-43	S′ = HP; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.4[b]. Tris-buffer, RNO as monitor of P.	83N270
	H_2O pH = 8.0	air	0.16		CP/Pa-43	S′ = HP; A = 2,2,6,6-Tetramethyl-4-piperidone; P = 2,2,6,6-Tetramethyl-4-piperidone *N*-oxyl; rel. to ϕ_Δ(S′) = 0.4[b]. P monitored by esr.	83N270
2.166	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dimethyl ester (PPDME)**						
	$(C_2H_5)_2O$	air[a]	0.77		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70.	88F450
	C_5H_5N	O_2	0.70		CP/Oc-14	A = H_2NCSNH_2. Assumed f_r^A = 2.	74E522
	C_5H_5N	O_2	1.1		CP/Oc-14	A = Pregnenolone.	587002
	$C_6H_5CH_3$	air[a]	0.80		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm. $P_T^{O_2}$ = 1.	90E615
	C_6D_6	0.1×10^{-3}	0.45^T	0.68	PL/LI-56,42	S′ = Pz; rel. to ϕ_Δ(S′) = 0.83; λ_{exc} = 532 nm; used ϕ_T(S) = 0.66. $P_T^{O_2}$ = 1.	90A328
	C_6D_6	1.2% O_2 in N_2		0.79	PR/LI-60	S′ = Np; TD = BP; rel. to f_Δ^T(S′) = 0.55. $P_T^{O_2}$ = 1; cor. for energy transfer efficiency.	90A328
	C_6D_6	air		0.73	PL/LI-56,38	S′ = Pz; rel. to f_Δ^T(S′) = 1.0; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1.	90A328
	C_6D_6	air	0.59		PL/LI-56	S′ = Pz; rel. to ϕ_Δ(S′) = 0.83; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; assumed $f_T^{O_2}$ = 1.	90A328
	C_6D_6	air[a]	0.65* 0.57		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; meas. ϕ_T(S) = 0.66; λ_{exc} = 347 nm. f_Δ^T = 0.86 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185
	C_6D_6	O_2	0.63		PL/LI-56	S′ = Pz; rel. to ϕ_Δ(S′) = 0.83; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; assumed $f_T^{O_2}$ = 1.	90A328
	C_6H_6	O_2	0.57		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; λ_{exc} = 347 nm; used ϕ_T(S) = 0.80. f_Δ^T = 0.71 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185 86E061
	CCl_4	air	0.70		MP/LI-56	S′ = Ph a; rel. to ϕ_Δ(S′) = 0.8. $P_T^{O_2}$ = 1.	82F161
	CCl_4	air	0.77		MP/LI-56	S′ = Chl a; rel. to ϕ_Δ(S′) = 0.55. $P_T^{O_2}$ = 1.	80E714 79A010
2.167	**Porphine-2,18-dipropanoic acid, 21,23-dideutero-7,12-diethenyl-3,8,13,17-tetramethyl-, dimethyl ester (PPDME-d_2)**						
	$C_6H_5CH_3$	air[a]	0.80		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm. $P_T^{O_2}$ = 1.	90E615
2.168	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dimethyl ester, magnesium(II)**						
	$(C_2H_5)_2O$	air[a]	0.77		PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70.	88F450
2.169	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dimethyl ester, zinc(II)**						
	CCl_4	air	0.65		MP/LI-56	S′ = Ph a; rel. to ϕ_Δ(S′) = 0.8.	82F161
2.170	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, magnesium(II) (MgPP)**						
	D_2O	air[a]	≤0.02		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Colloidal soln. contg. 0.5% NH_4OH.	88F450
	D_2O (mic)	air[a]	0.56		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to ϕ_Δ(S′) = 0.70. Soln. cont. 1% Triton X-100.	88F450
2.171	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dimethyl ester, palladium(II) (PdPPDME)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.95		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E667
2.172	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dichlorotin(IV)**						
	D_2O (mic)	air[a]	0.33		PL/LI-56,42	S′ = H_2TPPS^{4-}; meas. ϕ_T(S) = 0.68; λ_{exc} = 347 nm. f_Δ^T = 0.48 assuming $P_S^{O_2}$ = 0; soln. cont. CTAB micelles.	86F541

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.172	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, dichlorotin(IV)—Continued**						
	MeOD	O_2	0.70* 0.58		PL/LI-56	S′ = HP; rel. to ϕ_Δ(S′) = 0.53; λ_{exc} = 347 nm. Recalcd. using ϕ_Δ(S′) = 0.64 from [88Z155]; $P_T^{O_2}$ = 1.	88R194
2.173	**Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, zinc(II) (ZnPP)**						
	H_2O pH = 8.0	air	0.05		CP/Pa-43	S′ = HP; A = 2,2,6,6-Tetramethyl-4-piperidone; P = 2,2,6,6-Tetramethyl-4-piperidone *N*-oxyl; rel. to ϕ_Δ(S′) = 0.4[b]. P monitored by esr.	83N270
	H_2O pH = 8.0	air	0.04		CP/Pa-43	S′ = HP; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.4[b]. Tris-buffer, RNO as monitor of P.	83N270
2.174	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, di[4-(diphenylmethylaminocarbonyl-2-nitrophenylmethyl] ester**						
	CH_2Cl_2	air	0.22		PL/LI-56	S′ = MPDME; rel. to ϕ_Δ(S′) = 0.65*; 0.57; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; rel. to S′ in benzene.	91E134
	CH_2Cl_2	O_2	0.16		CP/Ac-43	S′ = MPDME; A = BRH_2; rel. to ϕ_Δ(S′) = 0.57.	89F267
2.175	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, di[4-(diphenylmethylaminocarbonylphenylmethyl] ester**						
	CH_2Cl_2	air	0.57		PL/LI-56	S′ = MPDME; rel. to ϕ_Δ(S′) = 0.57; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; rel. to S′ in benzene.	91E134
	CH_2Cl_2	O_2	0.54		CP/Ac-43	S′ = MPDME; A = BRH_2; rel. to ϕ_Δ(S′) = 0.57.	89F267
2.176	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, diethyl ester (MPDEE)**						
	C_5H_5N	O_2	0.70		CP/Oc-14	A = H_2NCSNH_2; λ_{exc} = 430 nm. Assumed f_r^A = 2.	737347 74E522
2.177	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester (MPDME)**						
	$C_6H_5CH_3$	air[a]	0.73		PL/LI-56,42	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543 87E667
	C_6D_6	1.2% O_2 in N_2		0.88	PR/LI-60	S′ = Np; TD = BP; rel. to f_Δ^T(S′) = 0.55. $P_T^{O_2}$ = 1; cor. for energy transfer efficiency.	91A358
	C_6D_6	air[a]	0.61		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; meas. ϕ_T(S) = 0.81; λ_{exc} = 347 nm. f_Δ^T = 0.73 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185
	C_6H_6	O_2	0.65* 0.57		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; λ_{exc} = 347 nm; used ϕ_T(S) = 0.81. f_Δ^T = 0.71 assuming $P_S^{O_2}$ = 0; used $P_T^{O_2}$ = 1.	87R185 86E061
	CCl_4	air	0.90		MP/LI-56	S′ = Ph a; rel. to ϕ_Δ(S′) = 0.8. $P_T^{O_2}$ = 1.	82F161
	CH_3CN	air[a]	0.61		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543
2.178	**Porphine-2,18-dipropanoic acid, 21,23-dideutero-7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester (MPDME-d_2)**						
	$C_6H_5CH_3$	air[a]	0.73		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm. $P_T^{O_2}$ = 1.	90E615
2.179	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, cadmium(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.76		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E667
2.180	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, copper(II)**						
	$C_6H_5CH_3$	air[a]	~0.5		PL/LI-56	S′ = PdOEP; rel. to ϕ_Δ(S′) = 1[b]; λ_{exc} = 347 nm.	91E392
	CCl_4	air[a]			PL/LI-56	S′ = GaTPP; meas. ϕ_Δ(S)/ϕ_Δ(S′) = 0.62; λ_{exc} = 347 nm.	91E392
2.181	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, magnesium(II)**						
	$C_6H_5CH_3$	air[a]	0.56		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543 87E667
	CH_3CN	air[a]	0.56		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 347 nm.	87E543
2.182	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, mercury(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.58		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E667
2.183	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, palladium(II)**						
	$C_6H_5CH_3$	air[a]	1.0			Reference value justified in [74E522] and [78E893].	82E010

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.184	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, oxovanadium(IV)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.96		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E667
2.185	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, dimethyl ester, zinc(II)**						
	$C_6H_5CH_3$	1.8×10^{-3}	0.82		PL/LI-56	S′ = PdMPDME; rel. to ϕ_Δ(S′) = 1.0; λ_{exc} = 347 nm.	87E667
2.186	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, [4-(diphenylmethylaminocarbonyl-2-nitrophenylmethyl] methyl ester**						
	CH_2Cl_2	air	0.40		PL/LI-56	S′ = MPDME; rel. to ϕ_Δ(S′) = 0.57; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; rel. to S′ in benzene.	91E134
2.187	**Porphine-2,18-dipropanoic acid, 7,12-diethyl-3,8,13,17-tetramethyl-, mono[4-(diphenylmethylaminocarbonyl-2-nitrophenylmethyl] ester**						
	CH_2Cl_2	air	0.37		PL/LI-56	S′ = MPDME; rel. to ϕ_Δ(S′) = 0.57; λ_{exc} = 532 nm. $P_T^{O_2}$ = 1; rel. to S′ in benzene.	91E134
2.188	**Porphine-2,18-dipropanoic acid, 7,12-diformyl-l-3,8,13,17-tetramethyl-, dimethyl ester**						
	CH_2Cl_2	air[a]	0.68		CP/Ac-43	S′ = PPDME; A = DPF; rel. to ϕ_Δ(S′) = 0.77; λ_{exc} = 405-408 nm.	82F333
2.189	**Porphine-2,18-dipropanoic acid, 7-[2-(dimethylamino)-2-oxoethyl]-8-ethyl-7,8-dihydro-3,7,12,17-tetramethyl, dimethyl ester, (Z)**						
	$CHCl_3$	air	0.62^T	0.9	CP/Ac-14,42	A = MDH; meas. ϕ_T(S) = 0.69; λ_{exc} = 405, 660 nm. $P_T^{O_2}$ = 1. Used f_r^A = 0.30, cor. for quenching of fluorescence of S.	90R006
	$CHCl_3$	air	0.54^T	0.8	CP/LI-56,42	S′ = TPP; rel. to ϕ_Δ(S′) = 0.50; meas. ϕ_T(S) = 0.69; λ_{exc} = 405 nm. $P_T^{O_2}$ = 1. Same value in O_2, cor. for quenching of fluorescence of S and S′.	90R006
2.190	**Porphine-2,18-dipropanoic acid, 7-[2-(dimethylamino)-2-oxoethyl]-8-ethylidene-7,8-dihydro-3,7,12,17-tetramethyl, dimethyl ester,**						
	CCl_4	air	0.58		CP/Ac-14	A = MDH. $P_T^{O_2}$ = 1; used f_r^A = 0.30.	90R006
	$CHCl_3$	$(1.2\text{-}9)\times10^{-3}$		0.95	CP/Ac-14,39	A = MDH; meas. ϕ_T(S) = 0.57. $P_T^{O_2}$ = 1; used f_r^A = 0.30; measured $f_\Delta^T\phi_T$ = 0.54, $f_\Delta^T f_T^{O_2}$ = 0.87; cor. for quenching of fluorescence of S.	90R006
	$CHCl_3$	air	0.54^T	0.95	CP/LI-56,42	S′ = TPP; rel. to ϕ_Δ(S′) = 0.50; meas. ϕ_T(S) = 0.57; λ_{exc} = 405 nm. $P_T^{O_2}$ = 1. cor. for quenching of fluorescence of S and S′.	90R006
2.191	**Porphine-2,18-dipropanoic acid, 7-[2-(dimethylamino)-2-oxoethyl]-8-heptyl-7,8-dihydro-3,7,12,17-tetramethyl, dimethyl ester, (Z)**						
	$CHCl_3$	air[a]	0.60	0.85	CP/LI-56,42	S′ = TPP; rel. to ϕ_Δ(S′) = 0.5; meas. ϕ_T(S) = 0.71; λ_{exc} = 405 nm. $P_S^{O_2}$ = 0.	91R253
2.192	**Porphine-2,18-dipropanoic acid, 7-[2-(dimethylamino)-2-oxoethyl]-8-heptyl-7,8-dihydro-3,7,12,17-tetramethyl, dimethyl ester, tin(IV), (Z)**						
	$CHCl_3$	air[a]	0.62	0.65	CP/LI-56,42	S′ = TPP; rel. to ϕ_Δ(S′) = 0.5; meas. ϕ_T(S) = 0.95; λ_{exc} = 405 nm. $P_S^{O_2}$ = 0.	91R253
2.193	**Porphine-2,18-dipropanoic acid, 7-[2-(dimethylamino)-2-oxoethyl]-8-heptyl-7,8-dihydro-3,7,12,17-tetramethyl, dimethyl ester, zinc(II), (Z)**						
	$CHCl_3$	air[a]	0.61	0.69	CP/LI-56,42	S′ = TPP; rel. to ϕ_Δ(S′) = 0.5; meas. ϕ_T(S) = 0.88; λ_{exc} = 405 nm. $P_S^{O_2}$ = 0.	91R253
2.194	**Porphine-2,18-dipropanoic acid, 7(12)-ethenyl-12(7)-formyl, dimethyl ester**						
	CH_2Cl_2	air[a]	0.71		CP/Ac-43	S′ = PPDME; A = DPF; rel. to ϕ_Δ(S′) = 0.77; λ_{exc} = 405-408 nm.	82F333
2.195	**Porphine-2,18-dipropanoic acid, 7-ethenyl-12-(1-hydroxyethyl)-3,8,13,17-tetramethyl-**						
	EtOD	air	0.45	0.65	PL/LI-56,42	S′ = HP; rel. to ϕ_Δ(S′) = 0.53; meas. ϕ_T(S) = 0.69; λ_{exc} = 347 nm. $P_S^{O_2}$ = 0.	87E054
	D_2O	O_2	0.2		PL/LI-56,42	S′ = HP; rel. to ϕ_Δ(S′) = 0.4[b]; meas. ϕ_T(S) = 0.34; λ_{exc} = 355 nm. Calculated f_Δ^T(S)/f_Δ^T(S′) = 1.19.	86E061
	D_2O (mic)	O_2	0.6		PL/LI-56,42	S′ = HP; rel. to ϕ_Δ(S′) = 0.4[b]; meas. ϕ_T(S) = 0.63; λ_{exc} = 355 nm. Calculated f_Δ^T(S)/f_Δ^T(S′) = 2.25; soln. cont. 0.01 mol L^{-1} CTAB.	86E061
2.196	**Porphine-2,18-dipropanoic acid, 12(7)-ethenyl-8(13)-hydroxy-3,8,13,17-tetramethyl-7(12)-(oxoethylidene)-, dimethyl ester**						
	C_6H_6	O_2	0.56* 0.49		PL/LI-56,42	S′ = Ac; rel. to ϕ_Δ(S′) = 0.73; λ_{exc} = 355 nm; used ϕ_T(S) = 0.66. f_Δ^T = 0.74 assuming $P_S^{O_2}$ = 0.	86E061
	CH_2Cl_2	air[a]	0.69		CP/Ac-43	S′ = PPDME; A = DPF; rel. to ϕ_Δ(S′) = 0.77; λ_{exc} = 405-408 nm.	82F333

Table 2, Quantum yields of photosensitized production of singlet oxygen, porphyrins.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	$f_\Delta{}^T$	Method	Comment	Ref.
2.197	**Porphine-2,18-dipropanoic acid, 3,7,12,17-tetramethyl- (Deuteroporphyrin, DP)**						
	H_2O pH = 7.0	O_2	0.51		CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
	H_2O pH = 8.0	air	0.22		CP/Pa-43	S′ = HP; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.4^b$. Tris-buffer, RNO as monitor of P.	83N270
	H_2O pH = 8.0	air	0.23		CP/Pa-43	S′ = HP; A = 2,2,6,6-Tetramethyl-4-piperidone; P = 2,2,6,6-Tetramethyl-4-piperidone *N*-oxyl; rel. to $\phi_\Delta(S') = 0.4^b$. P monitored by esr.	83N270
2.198	**Porphine-2,18-dipropanoic acid, 3,7,12,17-tetramethyl-, dimethyl ester (DPDME)**						
	$C_6H_5CH_3$	air[a]	0.53		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1.0$.	89A504
	C_6D_6	1.2% O_2 in N_2		0.75	PR/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta{}^T(S') = 0.55$. $P_T^{O_2} = 1$; cor. for energy transfer efficiency.	91A358
	C_6H_6	O_2	0.64* 0.56		PL/LI-56,42	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; meas. $\phi_T(S) = 0.72$; $\lambda_{exc} = 355$ nm. $f_\Delta{}^T = 0.78$ assuming $P_S^{O_2} = 0$.	86E061
2.199	**Porphine-2,18-dipropanoic acid, 21,23-dideutero-3,7,12,17-tetramethyl-, dimethyl ester (DPDME-d_2)**						
	$C_6H_5CH_3$	air[a]	0.58		PL/LI-56	S′ = PdMPDME; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$.	90E615
2.200	**Porphine-2-propanoic acid, 18-carboxy-20-(carboxymethyl)-8-ethenyl-13-ethyl-2,3-dihydro-3,7,12,17-tetramethyl- (Chlorin a_6)**						
	C_5H_5N	air[a]	0.74		PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.74$; meas. $\phi_T(S) = 0.81$; $\lambda_{exc} = 347$ nm.	89E505
	D_2O pD = 8.1	air[a]	0.75		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.7$; meas. $\phi_T(S) = 0.82$; $\lambda_{exc} = 347$ nm. Complex with HSA.	89E505
	D_2O pD = 8.1	air[a]	0.76		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.7$; meas. $\phi_T(S) = 0.80$; $\lambda_{exc} = 347$ nm.	89E505
	D_2O (mic) pD = 8.1	air[a]	0.70		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.7$; meas. $\phi_T(S) = 0.80$; $\lambda_{exc} = 347$ nm. Soln. cont. 10^{-3} mol L^{-1} Triton X-100.	89E505
2.201	**5-Porphinepropenoic acid, octaethyl-, ethyl ester**						
	MeOH	air	0.08		PL/LI-56,42	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.08$. $f_\Delta{}^T = \sim 1$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; secondary $\phi_\Delta(S') = 0.41$, S′ = ZnPCS.	90E491
2.202	**Porphine-2-propionamide, *N*-[4-[(7-chloro-4-quinolyl)amino]butyl]-5,10,15,20-tetraphenyl-**						
	H_2O (mic)	air			CP/Ac-43	S′ = HP; A = His; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.65$; $\lambda_{exc} = 405$ nm. Tris buffer, 1% Triton X-100.	90F450
2.203	**Porphine-2,7,12,17-tetrapropanoic acid, 3,8,13,18-tetrakis(carboxymethyl)- (Uroporphyrin I)**						
	H_2O pH = 7.4	air[a]		0.56	PL/LI,St-55,42	S′ = HP; rel. to $f_\Delta{}^T(S') = 0.51$; meas. $\phi_T(S) = 0.93$; $\lambda_{exc} = 532$ nm; used $\varepsilon_T(S) = 19000$ L mol^{-1} cm^{-1} at 440 nm. $\Delta\varepsilon_T(S) = 19{,}000$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.52$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	86A407
	H_2O pH = 7.4	O_2	0.71		CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 546$ nm. RNO as monitor of P.	85R008
	H_2O pH = 8.0	air	0.80		CP/Pa-43	S′ = HP; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.4^b$. Tris-buffer, RNO as monitor of P.	83N270
	H_2O pH = 8.0	air	0.62		CP/Pa-43	S′ = HP; A = 2,2,6,6-Tetramethyl-4-piperidone; P = 2,2,6,6-Tetramethyl-4-piperidone *N*-oxyl; rel. to $\phi_\Delta(S') = 0.4^b$. P monitored by esr.	83N270
	H_2O (mic) pH = 7.4	O_2	0.92		CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') = 0.75$; $\lambda_{exc} = 546$ nm. Soln. cont. 0.23 mg/mL egg phosphatidylcholine; RNO as monitor of P.	85R008
2.204	**Porphine-2,7,12,17-tetrapropanoic acid, 3,8,13,18-tetramethyl- (Coproporphyrin I)**						
	H_2O pH = 7.0	O_2	0.60		CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
2.205	**Porphine-2,7,12,18-tetrapropanoic acid, 3,8,13,17-tetramethyl- (Coproporphyrin III)**						
	H_2O pH = 7.4	air[a]		0.46	PL/LI,St-55,42	S′ = HP; rel. to $f_\Delta{}^T(S') = 0.51$; meas. $\phi_T(S) = 0.61$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) = 6500$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.28$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	86A407

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.205	**Porphine-2,7,12,18-tetrapropanoic acid, 3,8,13,17-tetramethyl- (Coproporphyrin III)**—Continued						
	H_2O (mic)	air[a]		0.71	PL/LI,St-55,42	S′ = HP; rel. to $f_\Delta^T(S') = 0.67$; meas. $\phi_T(S) = 0.81$; $\lambda_{exc} = 532$ nm. $\Delta\varepsilon_T(S) = 12{,}200$ L mol^{-1} cm^{-1} at 440 nm; $\phi_\Delta = 0.58$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$; Soln. cont. 2% Triton X-100.	86A407
2.206	**Porphine-2,7,12,18-tetrapropanoic acid, 3,8,13,17-tetramethyl-, tetramethyl ester**						
	C_6D_6	1.2% O_2 in N_2		0.74	PR/LI-60	S′ = Np; TD = BP; rel. to $f_\Delta^T(S') = 0.55$. $P_T^{O_2} = 1$; cor. for energy transfer efficiency.	91A358
2.207	**Porphine-2,7,18-tripropanoic acid, 13,13′-(1,6-hexanediyl)bis[3,8,12,17-tetramethyl-**						
	D_2O (mic)	O_2	0.18		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; $\lambda_{exc} = 355$ nm. Soln. cont. 10^{-2} mol L^{-1} CTAB.	88R204
2.208	**Porphine-2,7,18-tripropanoic acid, 13,13′-(1,3-propanediyl)bis[3,8,12,17-tetramethyl-**						
	D_2O (mic)	O_2	0.18		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; $\lambda_{exc} = 355$ nm. Soln. cont. 10^{-2} mol L^{-1} CTAB.	88R204
2.209	**Porphine-2,7,18-tripropanoic acid, 13,13′-(1,11-undecanediyl)bis[3,8,12,17-tetramethyl-**						
	D_2O (mic)	O_2	0.18		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; $\lambda_{exc} = 355$ nm. Soln. cont. 10^{-2} mol L^{-1} CTAB.	88R204
2.210	**[26] Porphyrin**						
	$CHCl_3$	air	0.14^T		PL/LI-56,42	S′ = TPP; rel. to $\phi_\Delta(S') = 0.50$; meas. $\phi_T(S) = 0.15$; $\lambda_{exc} = 546$ nm. $f_\Delta^T = \sim 1$ assuming $P_S^{O_2} = 0$; $P_T^{O_2} = 1$.	90E530
2.211	**Porphycene**						
	$C_6H_5CH_3$	air	0.30		PL/LI-56,42	S′ = An; rel. to $\phi_\Delta(S') = 0.61$; meas. $\phi_T(S) = 0.42$; $\lambda_{exc} = 347$ and 354 nm. Assumed $P_S^{O_2} = 0$ and $P_T^{O_2} = 1$ to give $f_\Delta^T = 0.7$.	86E633
	C_6H_6	O_2	0.34		PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; $\lambda_{exc} = 600$ nm. $P_T^{O_2} = 1$.	90E374
	C_6H_6	O_2	0.34		PL/LI-56,42	S′ = An; rel. to $\phi_\Delta(S') = 0.68$; meas. $\phi_T(S) = 0.3$; $\lambda_{exc} = 354$ nm. Assumed $P_S^{O_2} = 0$ and $P_T^{O_2} = 1$ to give $f_\Delta^T = 1$.	90E374
	D_2O (ves) pD = 7.4	O_2	0.17-0.37		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.72$; $\lambda_{exc} = 600$ nm. [DPPC] = 6.7 × 10^{-4} mol L^{-1}, S′ in D_2O-Tris buffer; concn. dependent.	90N126
	EtOH	air	0.30		PL/LI-56	S′ = An; rel. to $\phi_\Delta(S') = 0.61$; $\lambda_{exc} = 347$ and 354 nm. Also relative to $\phi_\Delta = 0.73$ for ZnTPP.	86E633
2.212	**Porphycene, 2,7,12,17-tetrapropyl-**						
	$C_6H_5CH_3$	air	0.35		PL/LI-56	S′ = An; rel. to $\phi_\Delta(S') = 0.61$; $\lambda_{exc} = 347$ and 354 nm. Also relative to $\phi_\Delta = 0.73$ for ZnTPP; some singlet quenching.	86E633
	C_6H_6	O_2	0.36		PL/LI-56	S′ = ZnTPP; rel. to $\phi_\Delta(S') = 0.73$; $\lambda_{exc} = 600$ nm.	90E374
	C_6H_6	O_2	0.36		PL/LI-56,42	S′ = An; rel. to $\phi_\Delta(S') = 0.68$; meas. $\phi_T(S) = 0.4$; $\lambda_{exc} = 354$ nm. Measured $P_S^{O_2} = 0$ and $P_T^{O_2} = 1$ to give $f_\Delta^T = 1$.	90E374
	D_2O (ves) pD = 7.4	O_2	0.22-0.37		PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.72$; $\lambda_{exc} = 553$ nm. [DPPC] = 6.7 × 10^{-4} mol L^{-1}, S′ in D_2O-Tris buffer; concn. dependent.	90N126
2.213	**Sapphyrin, 3,8,12,13,17,22-hexaethyl-2,7,18,23-tetramethyl-, diprotonated**						
	CD_2Cl_2	O_2	0.28		PL/LI-56,41	S′ = RBEE; rel. to $\phi_\Delta(S') = 0.61$; $\lambda_{exc} = 355$, 532 nm. $f_\Delta^T = \sim 0.5$ assuming $P_S^{O_2} = 0$; SAP^{2+} exists as monomer in $CHCl_3$ where $\phi_T(S) = 0.54$.	90E194
	CD_3CN	O_2	0.19		PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.37$; $\lambda_{exc} = 355$ nm. SAP^{2+} exists as mixt. of monomer and dimer in this solvent; at high concn. of SAP^{2+} (1 × 10^{-4} mol L^{-1}), $\phi_\Delta = 0.17$.	90E194
	CD_3OD	air	0.13		PL/LI-56	S′ = T(m-HOP)P; rel. to $\phi_\Delta(S') = 0.57$; $\lambda_{exc} = 355$, 532 nm. SAP^{2+} exists as mixt. of monomer and dimer in this solvent.	90E194
2.214	**Tetrabenzoporphine, zinc(II)**						
	C_5H_5N/ diox (1:1)	O_2	0.7		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6$[b]; $\lambda_{exc} = 633$ nm.	91F205

Table 2, Quantum yields of photosensitized production of singlet oxygen, from porphyrins and related species.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	f_Δ^T	Method	Comment	Ref.
2.215	**Tetrabenzo[*b,g,l,q*]porphine, 6,13-diphenyl-, cadmium(II)**						
	diox	O_2	0.5		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6^b$; $\lambda_{exc} = 633$ nm.	91F205
2.216	**Tetrabenzo[*b,g,l,q*]porphine, 6,13-diphenyl-, magnesium(II)**						
	diox	O_2	0.4		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6^b$; $\lambda_{exc} = 633$ nm.	91F205
2.217	**Tetrabenzo[*b,g,l,q*]porphine, 6,13-diphenyl-, zinc(II)**						
	C_5H_5N/ diox (1:1)	O_2	0.6		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6^b$; $\lambda_{exc} = 633$ nm.	91F205
	diox	O_2	0.6		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6^b$; $\lambda_{exc} = 633$ nm.	91F205
2.218	**Tetrabenzo[*b,g,l,q*]porphine, 6,13,20-triphenyl-, zinc(II)**						
	diox	O_2	0.7		PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.6^b$; $\lambda_{exc} = 633$ nm.	91F205
2.219	**Cadmium(II) chlorotexaphyrin nitrate**						
	MeOH	air	0.74	0.76	PL/LI-56,42	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; meas. $\phi_T(S) = 0.97$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.220	**Cadmium(II) texaphyrin nitrate**						
	MeOH	air	0.69	0.78	PL/LI-56,42	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; meas. $\phi_T(S) = 0.88$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.221	**Europium(III) dimethyltexaphyrin dihydroxide**						
	MeOH	air	<0.05		PL/LI-56	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.222	**Manganese(II) texaphyrin, hydroxide**						
	MeOH	air	<0.05		PL/LI-56	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.223	**Samarium(II) dimethyltexaphyrin dihydroxide**						
	MeOH	air	<0.05		PL/LI-56	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.224	**Zinc(II) chlorotexaphyrin chloride**						
	MeOH	air	0.65	0.73	PL/LI-56,42	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; meas. $\phi_T(S) = 0.88$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.225	**Zinc(II) texaphyrin chloride**						
	MeOH	air	0.61	0.74	PL/LI-56,42	S′ = T(p-HOP)P; rel. to $\phi_\Delta(S') = 0.56$; meas. $\phi_T(S) = 0.82$; $\lambda_{exc} = 355$ nm. $P_T^{O_2} = 1$, used $P_S^{O_2} = 0$.	89A356
2.226	**Zinc methyl pyroverdin**						
	C_6H_6	air[a]	0.17		PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm.	91R193
2.227	**Mesoverdin methyl ester**						
	C_6H_6	air[a]	0.10		PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm.	91R193
2.228	**Deuteroverdin methyl ester**						
	C_6H_6	air[a]	0.18		PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm.	91R193
2.229	**Coproverdin II trimethyl ester**						
	C_6H_6	air[a]	0.14		PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.84$; $\lambda_{exc} = 355$ nm.	91R193

[a] Oxygen concentration not given; assumed to be air saturated.
[b] Value of $\phi_\Delta(S')$ used in this work to calculate $\phi_\Delta(S)$ from authors' reported $\phi_\Delta(S)/\phi_\Delta(S')$.
[T] Value corrected for 100% quenching of T_1.
* Values recalculated using $\phi_\Delta(S')$ or $f_\Delta^T(S')$ from Table 4 or from the quoted reference.

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.1	**Anthra[9,1,2-*cde*]benzo[*rst*]pentaphene-5,10-dione (Dibenzanthrone)**					
	$CDCl_3$	air	0.03	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.2	**Anthra[9,1,2-*cde*]benzo[*rst*]pentaphene-5,10-dione, dibromo-16,17-dimethoxy-**					
	$CDCl_3$	air	<0.02	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.3	**Anthra[9,1,2-*cde*]benzo[*rst*]pentaphene-5,10-dione, 16,17-dinitro-**					
	$CDCl_3$	air	<0.02	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.4	**Anthra[9,1,2-*cde*]benzo[*rst*]pentaphene-10,18-dione, 6,15-dichloro-**					
	CCl_4	air	0.2	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
	$CDCl_3$	air	0.085	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.5	**Anthra[2,1-*d*:6,5-*d*′]bisthiazole-6,12-dione, 1,8-diphenyl-**					
	$EtOH/C_6H_6$	O_2	0.51	CP/Oc-27	A = Furan; λ_{exc} = 365 nm.	73F677
3.6	**2-Anthracenesulfonic acid, 1-amino-9,10-dihydro-9.10-dioxo-4-[3-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-, disodium salt**					
	2-PrOH/ H_2O (10:1)	air	0.017	CP/Ac-45	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 0.5; λ_{exc} = 546 nm.	79F662
3.7	**Benzenesulfonic acid, 2-[(4-amino-3-bromo-9,10-dihydro-9,10-dioxo-1-anthracenyl)amino]-5-methyl-, monosodium salt**					
	2-PrOH/ H_2O (10:1)	air	0.015	CP/Ac-45	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 0.5; λ_{exc} = 546 nm.	79F662
3.8	**Benzenesulfonic acid, 4-[(4-amino-9,10-dihydro-9,10-dioxo-1-anthracenyl)amino]phenyl]amino]-6-(2-chloro-1,3,5-triazin-4-yl)amino**					
	2-PrOH/ H_2O (10:1)	air	0.014	CP/Ac-45	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 0.5; λ_{exc} = 546 nm.	79F662
3.9	**Benzenesulfonic acid, 4-[(2-methoxy-5-(2-sulfatoethyl)sulfonylphenyl]azo-3-[2-hydroxy-5-methyl-imidaz-1-yl]-, disodium salt**					
	2-PrOH/ H_2O (10:1)	air	>0.1	CP/Ac-45	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 0.5; λ_{exc} = 546 nm.	79F662
3.10	**Benzimidazo[2,10*a*]benz[*de*]isoquinolin-7-one, 4-benzoyl-**					
	$CHCl_3$	air[a]	0.55	PL/LI-56	S′ = MPDEE; rel. to ϕ_Δ(S′) = 0.77. $P_T^{O_2} = 1$.	82F631
	EtOH	air[a]	0.56	CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to ϕ_Δ(S′) = 0.77. Assumed $P_T^{O_2} = 1$, $P_S^{O_2} = 0$.	82F631
3.11	**Benzo[*d*]naphtho[1,2-*b*]pyran-6-one, 4-(6-deoxy-α-galactofuranosyl)-1-hydroxy-10,12-dimethoxy-8-methyl- (Gilvocarcin V)**					
	DMSO	air	0.15	CP/Pa-43	S′ = RB; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethyl-piperidine *N*-oxyl; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 405 nm.	89D112
3.12	**Benzo[*a*]phenothiazinium, 5-amino-9-diethylamino-**					
	MeOH	air[a]	0.024	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 630 nm. Soln. cont. 0.04% acetic acid.	87R190
3.13	**Benzo[*a*]phenothiazinium, 5-amino-9-diethylamino-6-iodo-**					
	MeOH	air[a]	0.28	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76. Acidic soln.; data from Cincotta (unpubl.).	90E288
	MeOH	air[a]	0.17	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 630 nm. Soln. cont. 0.04% acetic acid.	87R190
3.14	**Benzo[*a*]phenothiazinium, 5-benzylamino-9-diethylamino-**					
	MeOH	air[a]	0.021	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 630 nm. Soln. cont. 0.04% acetic acid.	87R190
3.15	**Benzo[*a*]phenoxazinium, 5-amino-6-bromo-9-diethylamino-**					
	MeOH	air[a]	0.007	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 630 nm. Soln. cont. 0.04% acetic acid.	87R190
3.16	**Benzo[*a*]phenoxazinium, 5-amino-6,8-dibromo-9-ethylamino-**					
	MeOH	air[a]	0.082	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76; λ_{exc} = 630 nm. Soln. cont. 0.04% acetic acid.	87R190

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.17	**Benzo[*a*]phenoxazinium, 5-amino-9-diethylamino-**					
	MeOH	air[a]	0.005	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.18	**Benzo[*a*]phenoxazinium, 5-amino-9-diethylamino-2,6-diiodo-**					
	MeOH	air[a]	0.034	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.19	**Benzo[*a*]phenoxazinium, 5-amino-9-ethylamino-6,8-diiodo-**					
	MeOH	air[a]	0.50	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.20	**Benzo[*a*]phenoxazinium, 5-amino-9-diethylamino-2-iodo-**					
	MeOH	air[a]	0.008	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.21	**Benzo[*a*]phenoxazinium, 5-amino-9-diethylamino-6-iodo-**					
	MeOH	air[a]	0.06	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$. Acidic soln.; data from Cincotta (unpubl.).	90E288
	MeOH	air[a]	0.036	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.22	**Benzo[*a*]phenoxazinium, 5-benzylamino-9-diethylamino-**					
	MeOH	air[a]	0.005	CP/Ac-45	S′ = RB; A = DPBF; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 630$ nm. Soln. cont. 0.04% acetic acid.	87R190
3.23	**1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-*N*-(2-pyridyl)- 1,1-dioxide (Piroxicam)**					
	C_6H_6	air	<0.02	PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; $\lambda_{exc} = 308$ nm. No emission detected.	91F273
	C_6H_6	air[a]	≤0.01	PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; $\lambda_{exc} = 355$ nm.	87R130
	D_2O pH = ~7	air[a]	≤0.002	PL/LI-56	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 265$, 355 nm.	87R130
3.24	**1,2-Benzothiazin-4-one, 2,3-dihydro-2-methyl-, 1,1-dioxide**					
	C_6H_6	air[a]	0.40* 0.35	PL/LI-56	S′ = Ac; rel. to $\phi_\Delta(S') = 0.73$; $\lambda_{exc} = 355$ nm.	87R130
	D_2O pH = ~7	air[a]	0.20	PL/LI-56	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 265$ nm.	87R130
	D_2O pH = ~7	air[a]	0.18	PL/LI-56	S′ = H_2TMpyP^{4+}; rel. to $\phi_\Delta(S') = 0.74$; $\lambda_{exc} = 355$ nm.	87R130
3.25	**Benzothiazolium, 5-chloro-2-[2-[3-[(5-chloro-3-ethyl-2-benzothiazolidene)ethylidene]-2-(diphenylamino)-1-cyclopenten-1-yl)ethenyl]-3-ethyl-, perchlorate**					
	Propylene carbonate	O_2	0.014	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.26	**Benzothiazolium, 6-chloro-3-methyl-2-[7-(1,3,3-trimethyl-2-indolylidene)-1-(4-iodo-1,3,5-heptatrienyl)-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.017	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.27	**Benzothiazolium, 3,6-dimethyl-2-[7-(1,3,3-trimethyl-2-indolylidene)-1-(4-iodo-1,3,5-heptatrienyl)-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.012	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.28	**Benzothiazolium, 6-fluoro-3-methyl-2-[7-(1,3,3-trimethyl-2-indolylidene)-1-(4-iodo-1,3,5-heptatrienyl)-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.012	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.29	**Benzothiazolium, 6-methoxy-3-methyl-2-[7-(1,3,3-trimethyl-2-indolylidene)-1-(4-iodo-1,3,5-heptatrienyl)-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.006	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.30	**Benzothiazolium, 3-methyl-2-[7-(1,3,3-trimethyl-2-indol-2-ylidene)-1,3,5-heptatrienyl]-, iodide**					
	Propylene carbonate	O_2	0.017	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.31	**5-Benzoxazoleacetic acid, 2-(4-chlorophenyl)-α-methyl- (Benoxaprofen)**					
	H_2O pH = 8.0	air	0.18	CP/Oc-14	A = His. Assumed $\phi_{ox} = \phi_\Delta$ in the presence of 0.1 mol L^{-1} His, but measured $\phi_T = 0.19$ was reduced by 2.6 in the presence of His. Thus $2.6 \times \phi_{ox} = \phi_\Delta$ in the absence of His.	85E163
3.32	**3-Benzoxazolepropanesulfonic acid, 2-[4-(1,3-dibutyltetrahydro-4,6-dioxo-2-thioxo-5-pyrimidinylidene)-2-butenylidene]-, sodium salt *(Merocyanine 540)***					
	H_2O (ves)	O_2	0.015-0.05	CP/Ac-43	A = DMA; $\lambda_{exc} = 376$ nm. rel. to ϕ_Δ(MC540) in EtOH = 0.007; DMPC liposomes	91R140
	H_2O (ves)	O_2	0.035-0.05	CP/Ac-43	S′ = RB; A = ADPA; rel. to ϕ_Δ(S′) = 0.75; $\lambda_{exc} = 376$ nm. DMPC liposomes; rel. to S′ in H_2O; at 38°C ϕ_Δ increases by factor of 1.3	91R140
	D_2O/MeOD (1:1)	air[a]	0.02	PL/LI-56	S′ = Ery; rel. to ϕ_Δ(S′) = 0.60.	91A208
	H_2O/EtOH (94:6)	O_2	0.003	CP/Oc-43	S′ = RB; A = His; rel. to ϕ_Δ(S′) = 0.76; $\lambda_{exc} = 568$ nm. $\lambda_{exc} = 550$ for RB.	91R063
	EtOH	air	0.007	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.86.	88F151
	MeOH	air	0.004	CP/Ac-45	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.86. Rel. to S′ in ethanol.	88F151
	CD_3OD	O_2	0.03	PL/LI-56	S′ = T(m-HOP)P; rel. to ϕ_Δ(S′) = 0.57; $\lambda_{exc} = 532$ nm. $P_T^{O_2} = 1$.	91R017
3.33	**Biline-8,12-dipropanoic acid, 18-ethenyl-3-ethylidene-1,2,3,15,16,19,22,24-octahydro-2,7,13,17-tetramethyl-1,19-dioxo-, dimethyl ester**					
	$C_6H_5CH_3$	air	0.0008	CP/Ac-14	A = DPBF; $\lambda_{exc} = 597$ nm.	91R184
3.34	**(2,2′-Bipyridine)bis(bromo)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.05. Obs. P by esr.	88A276
3.35	**(2,2′-Bipyridine)bis(chloro)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.19. Obs. P by esr.	88A276
3.36	**(2,2′-Bipyridine)bis(cyano)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.31. Obs. P by esr.	88A276
3.37	**(2,2′-Bipyridine)bis(iodo)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.02. Obs. P by esr.	88A276
3.38	**(2,2′-Bipyridine)bis(thiocyanato)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.16. Obs. P by esr.	88A276
3.39	**2,2′-Bipyridine(2,3-naphthalenediolato)palladium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.04. Obs. P by esr	91F203
3.40	**2,2′-Bipyridine(2,3-naphthalenediolato)platinium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.15. Obs. P by esr	91F203
3.41	**2,2′-Biquinoline(2,3-naphthalenediolato)palladium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.05. Obs. P by esr	91F203

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—*Continued*

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.42	**2,2′-Biquinoline(2,3-naphthalenediolato)platinium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dlm); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.07$. Obs. P by esr	91F203
3.43	**Bis(azido)(2,2′-biquinoline)palladium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.04$. Obs. P by esr.	90F196
3.44	**Bis(azido)(2,2′-biquinoline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.05$. Obs. P by esr.	90F196
3.45	**Bis(azido)(2,2′-bipyridine)palladium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.18$. Obs. P by esr.	90F196
3.46	**Bis(azido)(4,7-diphenyl-1,10-phenanthroline)palladium(II) Pd(4,7-Ph_2phen)$(N_3)_2$**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.34$. Obs. P by esr.	90F196
3.47	**Bis(azido)(4,7-diphenyl-1,10-phenanthroline)platinum(II) Pt(4,7-Ph_2phen)$(N_3)_2$**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.76$. Obs. P by esr.	90F196
3.48	**Bis(azido)(1,10-phenanthroline)palladium(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.17$. Obs. P by esr.	90F196
3.49	**Bis(azido)(1,10-phenanthroline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(bpy)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.82$. Obs. P by esr.	90F196
3.50	**4-*tert*-Butylcatechol(1,10-phenanthroline)palladium(II) Pd(phen)(BCAT)**					
	DMF	O_2	~0.18	CP/Pa-43	S′ = Pt(phen)(BCAT); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S') = \sim 0.15^b$. Obs. P by esr.	89F181
3.51	**4-*tert*-Butylcatechol(1,10-phenanthroline)platinum(II) Pt(phen)(BCAT)**					
	DMF	O_2	~0.15	CP/Pa-43	S′ = HP; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S') = 0.6^b$. Obs. P by esr.	89F181
3.52	**4,4′-Carbocyanine, 1,1′-diethyl- (Kryptocyanine)**					
	D_2O (mic) pH = ~7	O_2	<0.03	PL/LI-56	S′ = T(m-HOP)P; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 355, 532$ nm. Triton X-100; same results for HSA-bound dye.	90R164
	H_2O (cells)	O_2	<0.05	PL/LI-56	S′ = T(m-HOP)P; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 355, 532$ nm.	90R164
	MeOD	O_2	<0.02	PL/LI-56	S′ = T(m-HOP)P; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 355, 532$ nm. $P_S^{O_2} = 0$, $P_T^{O_2} = 1$.	90R164
3.53	**Catechol(1,10-phenanthroline)palladium(II) Pd(phen)(CAT)**					
	DMF	O_2	~0.09	CP/Pa-43	S′ = Pt(phen)(BCAT); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S') = \sim 0.15^b$. Obs. P by esr.	89F181

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.54	**Catechol(1,10-phenanthroline)platinum(II) Pt(phen)(CAT)**					
	DMF	O_2	~0.07	CP/Pa-43	S′ = Pt(phen)(BCAT); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to ϕ_Δ(S′) = ~0.15[b]. Obs. P by esr.	89F181
3.55	**Cobrynic acid, bis(cyano)-7-de(carboxymethyl)-7,8-didehydro-, hexamethyl ester**					
	C_6D_6	O_2	0.13	CP/Ac-14	A = DMA; λ_{exc} = 710 nm.	83F222
	C_6H_6	O_2	0.13	CP/Ac-14	A = DMA; λ_{exc} = 710 nm.	83F222
	$CDCl_3$	O_2	0.12	CP/Ac-14	A = DMA; λ_{exc} = 710 nm.	83F222
	$CHCl_3$	O_2	0.12	CP/Ac-14	A = DMA; λ_{exc} = 710 nm.	83F222
	MeOD	O_2	0.18	CP/Ac-14	A = DMA; λ_{exc} = 710 nm.	83F222
3.56	**Diazene, 1-(4-acetylamino-5-hydroxy-2-methylphenyl)-2-phenyl-**					
	$CHCl_3$	air[a]	0.04	PL/LI-56	S′ = MPDEE; rel. to ϕ_Δ(S′) = 0.77. $P_T^{O_2}$ = 1.	82F631
	EtOH	air[a]	0.05	CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to ϕ_Δ(S′) = 0.77. Assumed $P_T^{O_2}$ = 1, $P_S^{O_2}$ = 0.	82F631
3.57	**Diazene, 1-(2-bromo-6-cyano-4-nitrophenyl)-2-[2-(acetylamino)-4-[*N*-(2-cyanoethyl)-*N*-(2-hydroxyethyl)amino]-5-methoxyphenyl]-**					
	Dibutyl terephthalate	air[a]	~0.0007	CP/Ac-43	A = TPCP; λ_{exc} = 589 nm. Rel. to ϕ_Δ(TPP) = 0.74 and ϕ_Δ(ZnTPP) = 0.79 in pyridine. Short lifetime indicates $P_T^{O_2}$ <1.	81F609
3.58	**Diazene, 1-(2-bromo-4,6-dinitrophenyl)-2-[2-(acetylamino)-4-[*N*-(2-cyanoethyl)-*N*-(2-hydroxyethyl)amino]-5-methoxyphenyl]-**					
	Dibutyl terephthalate	air[a]	~0.0007	CP/Ac-43	A = TPCP; λ_{exc} = 589 nm. Rel. to ϕ_Δ(TPP) = 0.74 and ϕ_Δ(ZnTPP) = 0.79 in pyridine. Short lifetime indicates $P_T^{O_2}$ <1.	81F609
3.59	**Diazene, 1-(2-chloro-4,6-dinitrophenyl)-2-[2-(acetylamino)-4-[*N*-(2-cyanoethyl)-*N*-(2-hydroxyethyl)amino]-5-methoxyphenyl]-**					
	Dibutyl terephthalate	air[a]	~0.0007	CP/Ac-43	A = TPCP; λ_{exc} = 589 nm. Rel. to ϕ_Δ(TPP) = 0.74 and ϕ_Δ(ZnTPP) = 0.79 in pyridine. Short lifetime indicates $P_T^{O_2}$ <1.	81F609
3.60	**Diazene, 1-(4,6-dinitrophenyl)-2-[2-(acetylamino)-4-[*N*-(2-cyanoethyl)-*N*-(2-hydroxyethyl)amino]-5-methoxyphenyl]-**					
	Dibutyl terephthalate	air[a]	~0.0007	CP/Ac-43	A = TPCP; λ_{exc} = 589 nm. Rel. to ϕ_Δ(TPP) = 0.74 and ϕ_Δ(ZnTPP) = 0.79 in pyridine. Short lifetime indicates $P_T^{O_2}$ <1.	81F609
3.61	**Diazene, 1-(4-methylphenyl)-2-[1-(phenylaminocarbonyl)-2-oxopropyl]-**					
	DMAA	air	<0.0022	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 435 nm.	86F622
	DMF	air	<0.012	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 564 nm.	86F622
	DMF	air	<0.0021	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 435 nm.	86F622
3.62	**Diazene, 1-phenyl-2-[1-(phenylaminocarbonyl)-2-oxopropyl]-**					
	DMAA	air	<0.026	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 435 nm.	86F622
	DMF	air	<0.024	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 564 nm.	86F622
	DMF	air	<0.023	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 435 nm.	86F622
	2-PrOH	air	≤0.022	CP/Ac-43	S′ = RB; A = DMA; rel. to ϕ_Δ(S′) = 1; λ_{exc} = 435 nm.	86F622
3.63	**Dibenz[*f,i,j*]isoquinoline-2,7-dione, 3-methyl-6-(phenylamino)-**					
	$CHCl_3$	air[a]	0.008	PL/LI-56	S′ = MPDEE; rel. to ϕ_Δ(S′) = 0.77. $P_T^{O_2}$ = 1.	82F631
	EtOH	air[a]	0.02	CP/Oc-43	S′ = MPDEE; A = H_2NCSNH_2; rel. to ϕ_Δ(S′) = 0.77. Assumed $P_T^{O_2}$ = 1, $P_S^{O_2}$ = 0.	82F631
3.64	**Dibenzo[*def,mno*]chrysene-6,12-dione, 4,10-dibromo-**					
	CCl_4	air	0.75* 0.85	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.65	**2,3:7,8-Dibenzopyrene-1,6-dione**					
	$C_6H_4(CH_3)_2$	air[a]	0.77	PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90F577
	CH_3CN	air[a]	0.70	PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.70; λ_{exc} = 337 nm.	90F577

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.65	**2,3:7,8-Dibenzopyrene-1,6-dione**—Continued					
	CCl_4	air	0.7* 0.8	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	85E863
	EtOH	air[a]	0.63	PL/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90F577
	$EtOH/C_6H_6$	O_2	0.62	CP/Oc-27	A = Furan; $\lambda_{exc} = 365$ nm.	73F677
	D_2O	air[a]	~0.09	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Aggregates present.	90F577
	D_2O/EtOH (75:25)	air[a]	~0.1	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90F577
3.66	**2,3:7,8-Dibenzopyrene-1,6-dione, 4,9-dibromo-**					
	CCl_4	air	0.84* 0.95	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	85E863
3.67	**2,3:7,8-Dibenzopyrene-1,6-dione, 4,9-dichloro-**					
	$CDCl_3$	air	0.65	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	85E863
3.68	**Dibromo(1,10-phenanthroline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = $Pt(phen)(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.07$. Obs. P by esr.	88A276
3.69	**Dichloro(1,10-phenanthroline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = $Pt(phen)(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.19$. Obs. P by esr.	88A276
3.70	**Dicyano(1,10-phenanthroline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = $Pt(phen)(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.41$. Obs. P by esr.	88A276
3.71	**Dihematoporphyrin ester**					
	D_2O	O_2	0.4	PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.4$[b]; $\lambda_{exc} = 355$ nm.	86E061
	D_2O (mic)	O_2	0.6	PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.4$[b]; $\lambda_{exc} = 355$ nm. Soln. cont. 0.01 mol L^{-1} CTAB.	86E061
	D_2O (mic)	air[a]	0.29	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; meas. $\phi_T(S) = 0.90$; $\lambda_{exc} = 347$ nm. $P_T^{O_2} = 1$; CTAB micelles; detd. mol. wt. of DHE of = 4200.	86F541 87R188
	MeOD	air[a]	0.30	PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; $\lambda_{exc} = 347$ nm. Reported $\phi_\Delta = 0.25$, using $\phi_\Delta(S') = 0.53$; recalcd. using $\phi_\Delta(S')$ from [88Z155]; detd. mol. wt. of DHE of = 4200.	87R188
3.72	**Dihematoporphyrin ester chlorin**					
	D_2O (mic)	air[a]	0.23	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; meas. $\phi_T(S) = 1$; $\lambda_{exc} = 347$ nm. Soln. cont. 10^{-2} mol L^{-1} CTAB.	87R188 86F541
	MeOD	air[a]	0.30	PL/LI-56	S′ = HP; rel. to $\phi_\Delta(S') = 0.64$; meas. $\phi_T(S) = 0.85$; $\lambda_{exc} = 347$ nm. Reported $\phi_\Delta = 0.25$, using $\phi_\Delta(S') = 0.53$; recalcd. using $\phi_\Delta(S')$ from [88Z155]; assumed mol. wt. = 1200.	87R188 86F541
3.73	**Diiodo(1,10-phenanthroline)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = $Pt(phen)(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.04$. Obs. P by esr.	88A276
3.74	**3,4-Dimercaptotoluene(1,10-phenanthroline)palladium(II) Pd(phen)(DMT)**					
	DMF	O_2	~0.01	CP/Pa-43	S′ = Pt(phen)(BCAT); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to $\phi_\Delta(S') = \sim 0.15$[b]. Obs. P by esr.	89F181

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.75	**Dinaphtho[2,3:*a*:2′,3′-*i*]]carbazole-4,9-diamine, *N,N′*-dibenzoyl-10,15,16,17-tetrahydro-5,10,15,17-tetraoxo-**					
	$CDCl_3$	air	0.2	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S') = 0.7$.	85E863
3.76	**4,7-Diphenyl-1,10-phenanthroline(2,3-naphthalenediolato)platinium(II) Pt(4,7-Ph_2phen)(dnt)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S') = 0.63$. Obs. P by esr	91F203
3.77	**Fulvic acids**					
	H_2O pH = 4.1-8.6	air	0.014-0.093	CP/Ac-14	A = 2,5-DMF; $\lambda_{exc} = 366$ nm. In various natural waters.	777245
	H_2O pH = 3.5-10.5	O_2	0.010-0.030	CP/Oc-14	A = FFA.	87F139
3.78	**Hematoporphyrin derivative (Photofrin I)**					
	D_2O	air[a]	0.25	PL/LI-56	S′ = H_2TPPS^{4-}: rel. to $\phi_\Delta(S') = 0.70$: $\lambda_{exc} = 337$ nm.	89E729
	D_2O (mic)	air[a]	0.77	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. contg. 2% Triton X-100.	89E729
	D_2O (mic)	O_2	0.35	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$; $\lambda_{exc} = 355$ nm. Soln. cont. 10^{-2} mol L^{-1} CTAB.	88R204
	EtOH	air[a]	0.77	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	EtOH	air[a]	0.75	CP/Ac-14	A = DPBF; $\lambda_{exc} = 620$ nm. Assumed $f_r^A = 2$.	76R193
	H_2O	air[a]	0.12	CP/Oc-14	A = FFA; $\lambda_{exc} = 405$ nm. Used $f_r^A = 1.23$; $\phi_\Delta = 0.061, 0.037, 0.067$ and 0.05 in soln. contg. 0.9% NaCl excited at 405, 436, 546, and 650 nm, resp.	85F332
	H_2O pH = 7.4	O_2	0.06	CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') =$ 0.75; $\lambda_{exc} = 546$ nm. RNO as monitor of P.	85R008
	H_2O (mic) pH = 7.4	O_2	0.87	CP/Ac-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to $\phi_\Delta(S') =$ 0.75; $\lambda_{exc} = 546$ nm. RNO as monitor of P; soln. cont. 0.23 mg/mL egg phosphatidylcholine.	85R008
	MeOH	air[a]	0.83	CP/Oc-14	A = FFA; $\lambda_{exc} = 405$ nm. Used $f_r^A = 1.52$.	85F332
3.79	**Hematoporphyrin dimers**					
	D_2O	air[a]	0.11	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	D_2O (mic)	air[a]	0.52	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. contg. 2% Triton X-100.	89E729
	EtOH	air[a]	0.60	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	H_2O pH = 7.0	O_2	0.29	CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
3.80	**Hematoporphyrin monomer:dimer:oligomer 2:3:9**					
	H_2O pH = 7.0	O_2	0.14	CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
3.81	**Hematoporphyrin monomer:dimer:oligomer 4:2:1**					
	H_2O pH = 7.0	O_2	0.40	CP/Pa-43	S′ = RB; A = His; rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
3.82	**Hematoporphyrin monomer:dimer:oligomer 5:3:4**					
	H_2O pH = 7.0	O_2	0.28	CP/Pa-43	S′ = RB: A = His: rel. to $\phi_\Delta(S') = 0.75$. RNO as monitor of P.	89F580
3.83	**Hematoporphyrin oligomers**					
	D_2O	air[a]	0.06	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
	D_2O (mic)	air[a]	0.49	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm. Soln. contg. 2% Triton X-100.	89E729
	EtOH	air[a]	0.31	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	89E729
3.84	**Humic acids**					
	H_2O pH = 7.2-8.0, 13.0	O_2	0.005-0.026	CP/Ac-14	A = FFA; $\lambda_{exc} = 366$ nm.	84F269 87F139

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.85	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, cobalt(II) salt (Cobalt(II) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.006.	88F568
3.86	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, cobalt(III) salt (Co(III) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.006.	88F568
3.87	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, chromium(III) salt (Cr(III) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 14.	88F568
3.88	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, copper(II) salt (Cu(II) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.04.	88F568
3.89	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, iron(III) salt (Fe(III) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.4.	88F568
3.90	**Imidazole, 4,5-diphenyl-2-[(2-carboxy-5-methylphenyl)azo]-, nickel(II) salt (Ni(II) Dye II)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye II; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.006.	88F568
3.91	**Imidazole, 4,5-diphenyl-2-[(2-hydroxy-5-nitrophenyl)azo]-, cobalt(II) salt (Cobalt(II) Dye III)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye III; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.0012.	88F568
3.92	**Imidazole, 4,5-diphenyl-2-[(2-hydroxy-5-nitrophenyl)azo]-, cobalt(III) salt (Co(III) Dye III)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye III; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.0012.	88F568
3.93	**Imidazole, 4,5-diphenyl-2-[(2-hydroxy-5-nitrophenyl)azo]-, copper(II) salt (Cu(III) Dye III)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye III; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.0029.	88F568
3.94	**Imidazole, 4,5-diphenyl-2-[(2-hydroxy-5-nitrophenyl)azo]-, nickel(II) salt (Ni(II) Dye III)**					
	DMF	air[a]		CP/Ac-43	S′ = Zn(II) Dye III; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.0012.	88F568
3.95	**Indolium, 2-[7-(4-bromo-1,3,3-trimethyl-2-indol-2-ylidene)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.017	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.96	**Indolium, 2-[7-(4-chloro-1,3,3-trimethyl-2-indol-2-ylidene)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.012	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.97	**Indolium, 2-[7-(4-iodo-1,3,3-trimethyl-2-indol-2-ylidene)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, iodide**					
	Propylene carbonate	O_2	0.024	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.98	**Indolium, 2-[7-(4-iodo-1,3,3-trimethyl-2-indol-2-ylidene)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.02	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.99	**Indolium, 2-[7-(1,3,3-trimethyl-2-indol-2-ylidene)-1-[4-(2,2-dimethoxyethyl)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.011	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.100	**Indolium, 2-[7-(1,3,3-trimethyl-2-indol-2-ylidene)-1-[4-(1-piperidinio)-1,3,5-heptatrienyl]-1,3,3-trimethyl-, bis(tetrafluoroborate)**					
	Propylene carbonate	O_2	0.022	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.101	**Indolium, 2-[7-(1,3,3-trimethyl-2-indol-2-ylidene)-1-[4-[3-(1,3,3-trimethyl-2-indolylidene)-2-propenyl]-1,3,5-heptatrienyl]-1,3,3-trimethyl-, tetrafluoroborate**					
	Propylene carbonate	O_2	0.008	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.102	**Indol-3-one, 5-bromo-2-(9-chloro-3-oxonaphtho[1,2-*b*]thien-2-ylidene)-4-methyl-1,2-dihydro-**					
	$CDCl_3$	air	0.025	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S')$ = 0.7.	85E863
3.103	**Malachite Green cation**					
	MeOH	O_2	<0.002	CP/Ac-43	S′ = RB; A = Bu_2S; rel. to $\phi_\Delta(S')$ = 0.80[b]; λ_{exc} = 546 nm. Measured $P_T^{O_2}$ = 1.	80F304
3.104	**Mesoporphyrin bound to poly(styrene-co-divinylbenzene)**					
	CH_2Cl_2	O_2	0.34	CP/Ac-43	S′ = MPDME; A = BRH_2; rel. to $\phi_\Delta(S')$ = 0.57.	89F267

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.105	**Mesoporphyrin di[4-(diphenylmethylaminocarbonyl-2-nitrophenylmethyl] ester bound to poly(styrene-co-divinylbenzene)**					
	CH_2Cl_2	O_2	0.02-0.03	CP/Ac-43	S′ = MPDME; A = BRH_2; rel. to $\phi_\Delta(S') = 0.57$. (0.29 or 0.10) × 10^{-3} mol MP/g resin	89F267
3.106	**Mesoporphyrin di[4-(diphenylmethylaminocarbonylphenylmethyl] ester bound to poly(styrene-co-divinylbenzene)**					
	CH_2Cl_2	O_2	0.07	CP/Ac-43	S′ = MPDME; A = BRH_2; rel. to $\phi_\Delta(S') = 0.57$.	89F267
3.107	**Methanaminium, *N*-[4-[[4-(dimethylamino)phenyl][4-(phenylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-*N*-methyl-, chloride**					
	MeOH	O_2	0.006	CP/Ac-43	S′ = RB; A = Bu_2S; rel. to $\phi_\Delta(S') = 0.80^b$; $\lambda_{exc} = 546$ nm. Measured $P_T^{O_2} = 1$.	80F304
3.108	**2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-(Tetracycline)**					
	D_2O pD = 7	air	0.026	PL/LI-56	S′ = RF; rel. to $\phi_\Delta(S') = 0.30$; $\lambda_{exc} = 337$ nm.	87F290
3.109	**5,12-Naphthacenedione, 8-acetyl-10[(3-amino-2,3,6-trideoxy-hexopyranosyloxy]-tetrahydro-6,8,11-trihydroxy-1-methoxy-(Daunomycin)**					
	D_2O pH = 7.4	O_2	0.02	PL/LI-56,42	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$. $f_\Delta{}^T = \sim 0.1$-1 depending on $\phi_T(S)$.	89B024
3.110	**5,12-Naphthacenedione, 8-acetyl-7,8,9,10-tetrahydro-6,8,10,11-tetrahydroxy-1-methoxy- (*S*-cis) (Daunomycinone)**					
	C_6H_6	O_2	0.03	PL/LI-56,42	S′ = PPDME; rel. to $\phi_\Delta(S') = 0.55$. $f_\Delta{}^T = \sim 0.1$ using meas. $\phi_T(S) = 0.038$.	89B024
3.111	**5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy-α-L-*lyxo*-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy- (Adriamycin)**					
	D_2O pH = 7.4	O_2	0.02	PL/LI-56,42	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$. $f_\Delta{}^T = \sim 0.1$-1 depending on $\phi_T(S)$.	89B024
3.112	**12-Naphthaceneone, 8-acetyl-10[(3-amino-2,3,6-trideoxyhexopyranosyloxy]-tetrahydro-6,7,11-trihydroxy-5-imino-1-methoxy-(5-Iminodaunomycin)**					
	D_2O pH = 7.4	O_2	0.02	PL/LI-56,42	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.67$. $f_\Delta{}^T = \sim 0.1$-1 depending on $\phi_T(S)$.	89B024
3.113	**2-Naphthaleneacetic acid, 6-methoxy-α-methyl- (Naproxen)**					
	H_2O pH = 2, 7	air	~0.2	CP/Oc-43	S′ = BXP; A = 2,5-DMF; rel. to $\phi_\Delta(S') = 0.18$.	88R012
3.114	**2-Naphthalenecarboxamide, 4-[[4-(aminocarbonyl)phenyl]azo]-3-hydroxy-*N*-(2-methoxyphenyl)-**					
	DMF	air	<0.0014	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 564$ nm.	86F622
	DMF	air	<0.0056	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 435$ nm.	86F622
3.115	**2-Naphthalenecarboxamide, 3-hydroxy-4-[(4-methylphenyl)azo]-*N*-phenyl-**					
	DMF	air	<0.0012	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 564$ nm.	86F622
	DMF	air	<0.011	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 1$; $\lambda_{exc} = 435$ nm.	86F622
3.116	**2,7-Naphthalenedisulfonic acid, 5-[[4-chloro-6-(phenylamino)-1,3,5-triazin-2-yl]amino]-4-hydroxy-3-[(2-sulfophenyl)azo]-, trisodium salt**					
	2-PrOH/ H_2O (10:1)	air	0.0054	CP/Ac-45	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 0.5$; $\lambda_{exc} = 546$ nm.	79F662
3.117	**1-Naphthalenesulfonic acid, 3-[[[4-chloro-6-(4-methyl-2-sulfophenyl)amino]-1,3,5-triazen-2-yl]amino-3-(5-sulfophenyl)]azo]-, trisodium salt**					
	2-PrOH/ H_2O (10:1)	air	0.0058	CP/Ac-45	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 0.5$; $\lambda_{exc} = 546$ nm.	79F662
3.118	**1-Naphthalenesulfonic acid, 5-hydroxy-6-[[2-methoxy-5-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]azo]-, disodium salt**					
	2-PrOH/ H_2O (10:1)	air	0.0048	CP/Ac-45	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 0.5$; $\lambda_{exc} = 546$ nm.	79F662
3.119	**6-Naphthalenesulfonate ion, 1,1′-methylenebis-**					
	D_2O	air[a]	~0.4	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S') = 0.70$; $\lambda_{exc} = 337$ nm.	90F577
3.120	**1-Naphthol, 5-[[3-(aminosulfonyl)phenyl]sulfonylamino]-4-[2-(methylsulfonyl)-4-nitrophenylazo]-, conjugate base**					
	DMF	air	0.0037	CP/Ac-14,A18	A = DPBF.	79F412
	H_2O	air	0.00013	CP/Ac-14,A18	A = 2,5-DMF.	79F412

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.120	**1-Naphthol, 5-[[3-(aminosulfonyl)phenyl]sulfonylamino]-4-[2-(methylsulfonyl)-4-nitrophenylazo]-, conjugate base**—Continued					
	MeOH	air	0.0016	CP/Ac-14,A18	A = DPBF.	79F412
3.121	**1-Naphthol, 5-methoxy-4-[2-(methylsulfonyl)-4-nitrophenyl]azo-, conjugate base**					
	DMF	air	0.00027	CP/Ac-14,A18	A = DPBF.	79F412
3.122	**2-Naphthol, 1-(2-hydroxyphenylazo)-, aluminum(III) salt (Al(III) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 370.	88F568
3.123	**2-Naphthol, 1-(2-hydroxyphenylazo)-, chromium(III) salt (Cr(III) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 16.	88F568
3.124	**2-Naphthol, 1-(2-hydroxyphenylazo)-, cobalt(II) salt (Co(II) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.07.	88F568
3.125	**2-Naphthol, 1-(2-hydroxyphenylazo)-, cobalt(III) salt (Co(III) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.07.	88F568
3.126	**2-Naphthol, 1-(2-hydroxyphenylazo)-, copper(II) salt (Cu(II) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.07.	88F568
3.127	**2-Naphthol, 1-(2-hydroxyphenylazo)-, iron(III) salt (Fe(III) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 2.6.	88F568
3.128	**2-Naphthol, 1-(2-hydroxyphenylazo)-, nickel(II) salt (Ni(II) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = <0.07.	88F568
3.129	**2-Naphthol, 1-(2-hydroxyphenylazo)-, zinc(II) salt (Zn(II) Dye I)**					
	DMF	air[a]		CP/Ac-43	S′ = Cd(II) Dye I; A = DPBF; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.84.	88F568
3.130	**2-Naphthol, 1-(4-methyl-2-nitrophenylazo)-**					
	DMAA	air	<0.0031	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
	DMF	air	<0.0056	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 564 nm.	86F622
	DMF	air	<0.013	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
	2-PrOH	air	<0.0019	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
3.131	**2-Naphthol, 1-(4-nitrophenylazo)-**					
	DMAA	air	<0.0046	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
	DMF	air	<0.0077	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
	DMF	air	<0.0051	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 564 nm.	86F622
	2-PrOH	air	≤0.0012	CP/Ac-43	S′ = RB; A = DMA; rel. to $\phi_\Delta(S')$ = 1; λ_{exc} = 435 nm.	86F622
3.132	**Naphtho[1,8-*bc*]thiopyran-3-one, 2-(1-oxonaphtho[2,1-*b*]thiophen-2-ylidine)-, (*E*)**					
	$CDCl_3$	air	0.6	MP/LI-56	S′ = TPP; rel. to $\phi_\Delta(S')$ = 0.7.	85E863
3.133	**1,8-Naphthyridine-3-carboxylic acid, 1,4-dihydro-1-ethyl-7-methyl-4-oxo- (Nalidixic acid)**					
	D_2O pH = 4.4	air[a]	0.24	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S')$ = 0.67; λ_{exc} = 347 nm. pK_a = 6.1; ϕ_Δ decreases to 0.09 on addn. of eumelanin.	88R070
3.134	**1,8-Naphthyridine-3-carboxylic acid, 1,4-dihydro-1-ethyl-7-methyl-4-oxo-, anion**					
	D_2O pH = 8.9	air[a]	0.15	PL/LI-56	S′ = H_2TPPS^{4-}; rel. to $\phi_\Delta(S')$ = 0.67; λ_{exc} = 347 nm.	88R070
3.135	**2,2′-Oxatricarbocyanine, 3,3′-diethyl-, iodide**					
	Propylene carbonate	O_2	0.015	CL/Ac-47	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S')$ = 0.35; λ_{exc} = 633 nm.	87E690
3.136	**(1,10-Phenanthroline)bis(thiocyanato)platinum(II)**					
	DMF	O_2		CP/Pa-43	S′ = Pt(phen)$(N_3)_2$; A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. $\phi_\Delta(S)/\phi_\Delta(S')$ = 0.15. Obs. P by esr.	88A276

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.137	**1,10-Phenanthroline(2,3-naphthalenediolato)palladium(II) Pd(phen)(dnt)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. ϕ_Δ(S)/ϕ_Δ(S′) = 0.02. Obs. P by esr	91F203
3.138	**1,10-Phenanthroline(2,3-naphthalenediolato)platinum(II) Pt(phen)(dnt)**					
	DMF	O_2		CP/Pa-43	S′ = Pd(4,7-Ph_2phen)(dhn); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; meas. ϕ_Δ(S)/ϕ_Δ(S′) = 0.13. Obs. P by esr	91F203
3.139	**1,10-Phenanthroline(thiosalicylato)palladium(II) Pd(phen)(TSA)**					
	DMF	O_2	~0.03	CP/Pa-43	S′ = Pt(phen)(BCAT); A = TEMP-4-OH; P = 4-Hydroxy-2,2,6,6-tetramethylpiperidine *N*-oxyl; rel. to ϕ_Δ(S′) = ~0.15[b]. Obs. P by esr.	89F181
3.140	**1,10-Phenanthrolinetris(1-thienyl-4,4,4-trifluoro-1,3-butanedionato)europium(III) Eu(phen)$(tta)_3$**					
	CCl_4	$\to \infty$	0.45	PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7; λ_{exc} = 347 nm.	91E314
3.141	**Phenothiazine, 10-(1-azabicyclo[2.2.2]oct-3-ylmethyl)- (Mequitazine)**					
	C_6H_6	air	0.34* 0.28	PL/LI-56	S′ = BP; rel. to ϕ_Δ(S′) = 0.29; λ_{exc} = 308 nm.	91F273
3.142	**Phenothiazine, 2-chloro-10-dimethylaminopropyl- (Chlorpromazine)**					
	C_6H_6	air	0.33* 0.27	PL/LI-56	S′ = BP; rel. to ϕ_Δ(S′) = 0.29; λ_{exc} = 308 nm.	91F273
3.143	**12-(10′-Phenothiazinyl)dodecyl-1-sulfonate ion**					
	H_2O (mic)	O_2	0.095	CP/Oc-14	A = S; P = 12-(10'-Phenothiazinyl)dodecyl-1-sulfonate ion 9-sulfoxide.	85Z063
3.144	**Photofrin II**					
	H_2O pH = 7.4	O_2	0.01	PL/Ac-14	A = TrpH; λ_{exc} = 630 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.04	CP/Pa-43	S′ = RB; A = Im; P = Imidazole endoperoxide; rel. to ϕ_Δ(S′) = 0.75; λ_{exc} = 540 nm. RNO as monitor for P.	88N170
	H_2O pH = 7.4	O_2	0.13	CP/Oc-14	A = Im; λ_{exc} = 540 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
	H_2O pH = 7.4	O_2	0.09	CP/Ac-14	A = TrpH; λ_{exc} = 540 nm. Soln. cont. 1.6% NaCl in phosphate buffer.	88N170
3.145	**Poly(sodium styrenesulfonate-co-2-vinylnaphthalene)**					
	H_2O	O_2	0.25	CP/Ac-14	A = $C_6H_5CH{=}CH_2$.	91F015
3.146	**Pyran, 4-(dicyanomethylene)-6-(4-dimethylaminostyryl)-2-methyl-**					
	CCl_4	air[a]	0.0015	PL/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	90F568
3.147	**8,16-Pyranthrenedione**					
	$CDCl_3$	air	0.8	MP/LI-56	S′ = TPP; rel. to ϕ_Δ(S′) = 0.7.	85E863
3.148	**Pyrazole-3-selone, 4-(aminomethylene)-2,4-dihydro-5-methyl-2-phenyl-, (*Z*)-**					
	1-BuOH	air	0.16	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	c-C_6H_{12}	air	0.11	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	CCl_4	air	0.31	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	$CDCl_3$	air	0.16	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	CH_3CN	air	0.16	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	$CHCl_3$	air	0.14	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	EtOH	air	0.096	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	MeOH	air	0.13	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	MeOH-d_3	air	0.13	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.148	**Pyrazole-3-selone, 4-(aminomethylene)-2,4-dihydro-5-methyl-2-phenyl-, (*Z*)—**Continued					
	2-PrOH	air	0.12	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	diox	air	0.14	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
3.149	**Pyrazole-3-thione, 4-(aminomethylene)-2,4-dihydro-5-methyl-2-phenyl-**					
	1-BuOH	air	0.037	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	c-C_6H_{12}	air	0.033	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	CCl_4	air	0.15	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	$CDCl_3$	air	0.062	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	CH_3CN	air	0.055	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	$CHCl_3$	air	0.059	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	EtOH	air	0.037	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	MeOH	air	0.033	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	MeOH-d_3	air	0.038	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	2-PrOH	air	0.030	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
	diox	air	0.071	CP/Ac-14	A = S; λ_{exc} = 366 nm. $P_T^{O_2} = 1$.	85F646
3.150	**Pyrazol-3-one, 2-(4-bromophenyl)-4-(4-diethylamino-2-methylphenyl)-2,4-dihydro-imino-5-methylcarbamyl-**					
	CCl_4	O_2	0.0040	CP/Ac-14	A = 2M2P.	87F542
3.151	**Pyrazol-3-one, 2-(4-chlorophenyl)-4-(4-diethylamino-2-methylphenyl)-2,4-dihydro-imino-5-methylcarbamyl-**					
	CCl_4	O_2	0.0012	CP/Ac-14	A = 2M2P.	87F542
3.152	**Pyrazol-3-one, 4-(4-diethylamino-2-methylphenyl)imino-2,4-dihydro-5-methylcarbamyl-2-(3-methoxyphenyl)-**					
	CCl_4	O_2	0.0012	CP/Ac-14	A = 2M2P.	87F542
3.153	**Pyrazol-3-one, 4-(4-diethylamino-2-methylphenyl)imino-2,4-dihydro-5-methylcarbamyl-2-(3-methylphenyl)-**					
	CCl_4	O_2	0.0008	CP/Ac-14	A = 2M2P.	87F542
3.154	**Pyrazol-3-one, 4-[[4-(diethylamino)-2-methylphenyl]imino]-2,4-dihydro-5-methyl-2-phenyl-**					
	CCl_4	O_2	0.0026	CP/Ac-14	A = 2M2P.	87F542
3.155	**Pyrazol-3-one, 4-(4-diethylamino-2-methylphenyl)imino-5-methylcarbamyl-2,4-dihydro-2-(2,4,6-trichlorophenyl)-**					
	CCl_4	O_2	0.0016	CP/Ac-14	A = 2M2P.	87F542
3.156	**Pyrazol-3-one, 4-[[4-(diethylamino)phenyl]imino]-2,4-dihydro-5-methyl-2-phenyl-**					
	CCl_4	O_2	0.0027	CP/Ac-14	A = 2M2P.	87F542
3.157	**Pyrazol-3-one, 4-[[4-(dimethylamino)phenyl]imino]-2,4-dihydro-5-methyl-2-phenyl-**					
	CCl_4	O_2	0.0021	CP/Ac-14	A = 2M2P.	87F542
3.158	**Pyrazolo[1′,2′:2,3][1,2,3]triazolo[4,5-*a*]phenazin-4-ium, 1,3-dimethyl-**					
	c-C_6H_{12}	air	0.21	CP/Ac-27	A = DPBF; λ_{exc} = 543 nm.	80F548
	$CHCl_3$	air	0.037	CP/Ac-27	A = DPBF; λ_{exc} = 543 nm.	80F548
	$CHCl_3$/MeOH (8:2)	air	0.053	CP/Ac-27	A = DPBF; λ_{exc} = 543 nm.	80F548
3.159	**Pyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)selenapyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.004	CP/Ac-43 or 14	S′ = MB^+; A = DPBF; rel. to ϕ_Δ(S′) = 0.50.	90F157 90R069 88A269
3.160	**Pyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.05	CP/Ac-43 or 14	S′ = MB^+; A = DPBF; rel. to ϕ_Δ(S′) = 0.50.	90F157 90R069 88A269

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.161	**Pyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)thiapyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.0006	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90R069
3.162	**Pyrylium, 4,4′-(1,3-propenyl)bis[2,6-di(1,1-dimethylethyl)-**					
	MeOH	air	0.0004	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157 90R069 88A269
3.163	**4-Quinazolinone, 6-amino-2-(fluoromethyl)-3-(2-methylphenyl)- (Afloqualone)**					
	C_6H_6	air	0.17* 0.14	PL/LI-56	S′ = BP; rel. to $\phi_\Delta(S') = 0.29$; $\lambda_{exc} = 308$ nm.	91F273
3.164	**Remazol Brilliant Red 5B**					
	2-PrOH/ H_2O (10:1)	air	0.0068	CP/Ac-45	S′ = RB; A = DMA; rel. to $\phi_\Delta(S') = 0.5$; $\lambda_{exc} = 546$ nm.	79F662
3.165	**Rhodamine B cation**					
	MeOH	O_2	0.016	CP/Ac-43	S′ = RB; A = Bu_2S; rel. to $\phi_\Delta(S') = 0.80^b$; $\lambda_{exc} = 546$ nm. Measured $P_T^{O_2} = 1$.	80F304
3.166	**Rhodamine 6G cation**					
	C_5H_5N	O_2	0.12	CP/Oc-14	A = H_2NCSNH_2. Assumed $f_r^A = 2$.	737347 74E522
3.167	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene)**					
	CH_2Cl_2	O_2	0.76-0.91	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol; amount of bound dye varied, 9-284 mg RB/g polymer.	86P106
3.168	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), ammonium salt**					
	CH_2Cl_2	O_2	0.27	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.169	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), *sec*-butylammonium salt**					
	CH_2Cl_2	O_2	0.55	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.170	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), *tert*-butylammonium salt**					
	CH_2Cl_2	O_2	0.64	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.171	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), diethylammonium salt**					
	CH_2Cl_2	O_2	0.86	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.172	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), isobutylammonium salt**					
	CH_2Cl_2	O_2	0.50	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.173	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), piperidinium salt**					
	CH_2Cl_2	O_2	0.74	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.174	**Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), pyridinium salt**					
	CH_2Cl_2	O_2	0.35	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No. Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.175 Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), tributylammonium salt					
CH_2Cl_2	O_2	0.66	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.176 Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), triethylammonium salt					
CH_2Cl_2	O_2	0.78	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.177 Rose Bengal bound to chloromethylated poly(styrene-co-divinylbenzene), trimethylammonium salt					
CH_2Cl_2	O_2	0.46	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.178 Rose Bengal bound to poly(styrene-co-vinylbenzyl chloride)					
CH_2Cl_2	O_2	0.16-0.36	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 566$ nm. Rel. to S′ in methanol; bound dye varied 51-610 mg RB/1.07 g polymer.	85F171 85F436
MeOH (dis)	O_2	0.04-0.41	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 566$ nm. Rel. to S′ in methanol; bound dye varied 51-610 mg RB/1.07 g polymer.	85F436
3.179 Rose Bengal bound to poly(styrene-co-vinylbenzyl chloride), pyridinium salt					
CH_2Cl_2	O_2	0.41	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.180 Rose Bengal bound to poly(styrene-co-vinylbenzyl chloride), triethylammonium salt					
CH_2Cl_2	O_2	0.61	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 556$ nm. Rel. to S′ in methanol.	86P106
3.181 Rose Bengal on Sephadex A resin					
MeOH	O_2	0.55	CP/Ac or Oc-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; rel. to $\phi_\Delta(S') = 0.76$.	86F510
3.182 Rose Bengal polyglycol					
$C_6H_5CH_3$	air[a]	0.30	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 559$ nm. Rel. to S′ in methanol.	86F463
C_6H_6	air[a]	0.40	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 559$ nm. Rel. to S′ in methanol.	86F463
CH_2Br_2	air[a]	0.81	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 559$ nm. Rel. to S′ in methanol.	86F463
CH_2Cl_2	air[a]	0.76	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 559$ nm. Rel. to S′ in methanol.	86F463
EtOH	air[a]	0.75	CP/Pa-43	S′ = RB; A = 2,3-Diphenyl-1,4-dioxene; P = 1,2-Ethanediol dibenzoate; rel. to $\phi_\Delta(S') = 0.76$; $\lambda_{exc} = 559$ nm. Rel. to S′ in methanol.	86F463
3.183 Safranine cation					
MeOH	O_2	0.14	CP/Ac-43	S′ = RB; A = Bu_2S; rel. to $\phi_\Delta(S') = 0.80^b$; $\lambda_{exc} = 546$ nm. Measured $P_T^{O_2} = 1$.	80F304
3.184 Selenopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)-1,1-dihydroxytelluropyran-4-ylidene]-3-propenyl]-					
H_2O/CH_3OH (9:1)	air	≤0.004	CP/Ac-43 or 14	S′ = MB^+; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157

Table 3, Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.185	**Selenopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[2-[2,6-bis(1,1-dimethylethyl)selenopyran-4-ylidene]-4-(2-butenyl)]-**					
	MeOH	air	0.004	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157
3.186	**Selenopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[2-[2,6-bis(1,1-dimethylethyl)selenopyran-4-ylidene]-4-(2-pentenyl)]-**					
	MeOH	air	0.001	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157
3.187	**Selenopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)selenopyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.013	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$. ϕ_Δ same in air- or oxygen-satd. methanol.	90F157 90R069
3.188	**Selenopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.09	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$. $f_\Delta^T = 0.75$ using $\phi_T(S) = 0.12$ but $P_S^{O_2} < 1$.	90F157 90R069 88A269
3.189	**Sensitox HP resin**					
	MeOH	O_2	0.25	CP/Oc-43	S' = RB; A = 2,3-Diphenyl-1,4-dioxene; rel. to $\phi_\Delta(S') = 0.76$.	86F510
3.190	**Sensitox P resin**					
	MeOH	O_2	0.23 0.22	CP/Ac-43; CP/Oc-43	S' = RB; A = 2,3-Diphenyl-1,4-dioxene; rel. to $\phi_\Delta(S') = 0.76$.	86F510
3.191	**Telluropyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]ethyl]**					
	MeOH	air	0.006	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157
3.192	**Telluropyrylium, 2,6-bis(1,1-dimethylethyl)-4-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]methyl-**					
	MeOH	air	0.07	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157
3.193	**Telluropyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.12	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$. $f_\Delta^T = 0.67$ using $\phi_T(S) = 0.18$ but $P_S^{O_2} < 1$.	90F157 90R069 88A269
3.194	**2,2'-Thiatricarbocyanine, 3,3'-diethyl-, iodide**					
	Propylene carbonate	O_2	0.025	CL/Ac-47	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.195	**Thiopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)selenopyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.007	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157 90R069
3.196	**Thiopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)telluropyran-4-ylidene]-3-propenyl]**					
	MeOH	air	0.07	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157 90R069
3.197	**Thiopyrylium, 2,6-bis(1,1-dimethylethyl)-4-[1-[2,6-bis(1,1-dimethylethyl)thiopyran-4-ylidene]-3-propenyl]-**					
	MeOH	air	0.0006	CP/Ac-43 or 14	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.50$.	90F157 90R069
3.198	**Tricarbocyanine, 5,5'-dichloro-1,1',3,3,3',3'-hexamethyl-, iodide**					
	Propylene carbonate	O_2	0.02	CL/Ac-47	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.199	**Tricarbocyanine, 5,5'-difluoro-1,1',3,3,3',3'-hexamethyl-, iodide**					
	Propylene carbonate	O_2	0.014	CL/Ac-47	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.200	**Tricarbocyanine, 5,5'-dimethoxy-1,1',3,3,3',3'-hexamethyl-, iodide**					
	Propylene carbonate	O_2	0.004	CL/Ac-47	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690
3.201	**Tricarbocyanine, 1,1',3,3,3',3'-hexamethyl-, fluoride**					
	Propylene carbonate	O_2	0.013	CL/Ac-47	$S' = MB^+$; A = DPBF; rel. to $\phi_\Delta(S') = 0.35$; $\lambda_{exc} = 633$ nm.	87E690

Table 3. Quantum yields of photosensitized production of singlet oxygen, from drugs, dyes, polymers, etc.—Continued

No.	Solvent	$[O_2]$	ϕ_Δ	Method	Comment	Ref.
3.202	**Tricarbocyanine, 1,1′,3,3,3′,3′-hexamethyl-, iodide**					
	Propylene carbonate	O_2	0.015	CL/Ac-47	S′ = MB$^+$; A = DPBF; rel. to ϕ_Δ(S′) = 0.35; λ_{exc} = 633 nm.	87E690
3.203	**Tricarbocyanine, 1,1′,3,3,3′,3′-hexamethyl-, perchlorate**					
	Propylene carbonate	O_2	0.015	CL/Ac-47	S′ = MB$^+$; A = DPBF; rel. to ϕ_Δ(S′) = 0.35; λ_{exc} = 633 nm.	87E690
3.204	**Tricarbocyanine, 1,1′,3,3,3′,3′,5,5′-octamethyl-, iodide**					
	Propylene carbonate	O_2	0.015	CL/Ac-47	S′ = MB$^+$; A = DPBF; rel. to ϕ_Δ(S′) = 0.35; λ_{exc} = 633 nm.	87E690
3.205	**Tris(2,2′-bipyridine)ruthenium(II) ion bound to Dowex 50W-X1 resin**					
	MeOH	O_2	0.90	CL/Pa-14	A = TME; λ_{exc} = 488 nm.	83N166
3.206	**Tris(1,10-phenanthroline)ruthenium(II) ion bound to Dowex 50W-X1 resin**					
	MeOH	O_2	0.68	CL/Pa-14	A = TME; λ_{exc} = 488 nm.	83N166
3.207	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-2,4,5,7-tetraiodo-, dianion, bound as copoly(styrene-*p*-vinylbenzyl ester)**					
	DMF	air[a]	0.34	CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618
3.208	**Xanthen-3-one, 9-(2-carboxyethyl)-6-hydroxy-2,4,5-triiodo-, dianion, bound as copoly(styrene-*p*-vinylbenzyl ester)**					
	DMF	air[a]	0.33	CP/Ac-43	S′ = RB; A = DPBF; rel. to ϕ_Δ(S′) = 0.76.	88F618

[a] Oxygen concentration not given; assumed to be air saturated.
[b] Value of ϕ_Δ(S′) used in this work to calculate ϕ_Δ(S) from authors' reported ϕ_Δ(S)/ϕ_Δ(S′).
* Values recalculated using ϕ_Δ(S′) or f_Δ^T(S′) from Table 4 or from the quoted reference.